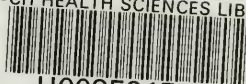


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# The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

**This Bulletin will be sent free to any citizen of the State upon request**

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Vol. 61

JANUARY, 1946

No. 1



The Public Health Nurse Helps Keep North Carolina Strong

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The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
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### SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters.)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
Table of Heights and Weights.	

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

## Postwar Expansion of Public Health Nursing\*

By

MARY J. DUNN, Senior Nurse (R),  
U. S. Public Health Service  
Washington, D. C.

FOR the first time in years we are liberated from the forces of aggression and the fear and dread of some new outrage against the decencies of mankind; we can now build constructively for a "Better Nation"—a "Better World"—for peace loving people. In so building during the period of reconversion, it is assumed that health programs will expand greatly and rapidly.

Dr. Parran has pointed out recently that, "in many peacetime health activities we shall have to 'learn by doing', but we shall learn faster and do better if we can agree upon certain basic assumptions which will shape our thinking and action. It is reasonable to assume that:—

1. Reconversion to a peacetime economy will create health problems comparable in scope and extent with those of war:

2. State and local health authorities will have to take over a larger share of the costs of many essential programs;

3. The release of manpower and materials for construction offers opportunities for the establishment of essential health facilities at an earlier time than could be anticipated two short months ago;

4. The Federal Government will not assume sole responsibility for the planning of

public health works; initial efforts must come from the States;

5. The training of health personnel, in sufficient numbers and of adequate qualifications, will require joint action on the part of all official and non-official agencies concerned;

6. A health organization larger than any we have known before, both in size and in scope of operations will be needed to attain the objectives of national health."

Many factors will contribute to the shaping up of expanded health programs; these factors in turn will have a direct relationship to the number and kind of public health nurses needed.

Therefore, it is timely that we as public health nurses have in mind our professional advancement, as well as the maximum contribution we may make to the commonwealth. It is by maintaining these two interests in proper balance that real progress may be made.

To-day nurses are the most numerous professional group in health departments; they hold over 50 percent of the classified technical positions. The number employed full-time by

\*Paper presented by Mary J. Dunn, Senior Nurse Officer (R), U. S. Public Health Service, Washington, D. C. at the annual convention of The North Carolina State Nurses Association and of the State League of Nursing Education, Winston-Salem, North Carolina, November 7, 1945.



public health agencies, including Boards of Education, number somewhat over 20,000. This does not take into account about 3,500 vacancies for which funds are currently available.

According to estimates compiled by the Subcommittee on Local Health Units of the American Public Health Association, at least 12,900 additional public health nurses are needed for public health protection of the population of Continental United States. This number would represent a ratio of one public health nurse to every 5,000 people. With increased emphasis on bedside nursing service on an hourly basis, the present number would need to be increased by more than 50 percent, thus providing a ratio of one public health nurse to every 2,000 people.

Thus, it is obvious that the present number of public health nurses is insufficient to meet current needs, and consequently is wholly inadequate to meet the demands of expanding programs.

Therefore, in considering any plan for the preparation of public health nurses it is assumed: 1) that they will be needed in increasing numbers; 2) that their preparation must fit them for the new evolving pattern of public health nursing.

For example, our pattern is bound to change with advances in medical science. Already there is a marked reduction and change in the prevalence and clinical course of certain communicable diseases,—especially among the Virus diseases and Venereal diseases,—because of scientific discovery and application. The catastrophies of our all too recent war have given a renewed stimulus to mental hygiene, Psychiatry, and a sound rehabilitation program. Our expanding life span has its consequent health problems including an upward swing of chronic and degenerative diseases, and the many implications in the area of Geriatrics. Certain economic changes and the growing interest in health and hospital insurance plans affect markedly the number and type of patient known to the public health nurse. Another factor influencing our functions, responsibilities, and relationships is the

many new types of workers—both professional and auxiliary—that have come into the health field. This pertains particularly to such personnel as the health educator, the nutritionist, Social worker, physical therapist, practical or vocational nurse, housekeeping aides,—to mention but a few.

If we are to prepare nurses to assume the many new and varied responsibilities that will be theirs, we should give thought:

- (1) to the most economical and effective type of preparation;
- (2) to the selection of promising recruits for public health nursing;
- (3) to needs and opportunities for financial assistance for essential training.

Obviously the largest number of nurses needed will be Staff nurses or general public health nursing practitioners. The 1944 Census of public health nurses revealed that only nine states had reached the minimum emergent ratio of one Staff nurse to every 5,000 people. How are these Staff nurses to be prepared most effectively and economically? Many, through basic nursing programs or curricula which are an integral part of our universities and colleges. Programs which we have in mind are those having as their objective the preparation of a Community nurse well-versed in the curative and preventive phases of nursing; one who possesses an attitude, an understanding, and a mastery of skill in caring for the whole patient in his different environmental situations; one who may take her place equally well in the hospital ward or in a public health agency under supervision. In order to prepare this type of professional nurse the teaching of the health, preventive, and rehabilitative elements of nursing, must be started very early in the basic curriculum and related to every function and to every appropriate learning situation. Likewise the concept of total nursing care calls for close coordination of the hospital nursing service with other community nursing services, simple but effective methods of referral and communication between these nursing services, and full appreciation of use of these channels

by the entire nursing service and instructional staff.

Assistance is frequently sought from public health agencies whereby students may have opportunity to observe, assist with, or give nursing care in homes. As a further means of implementing this broader concept of nursing care, an affiliation of two to three months, is frequently arranged with a public health nursing agency. Such an affiliation is planned ordinarily as an educational experience during the student's last year of training as an integral part of the required basic nursing curriculum. This experience should not be confused with the supervised practice period of the Senior Cadet which we come to know through our wartime accelerated basic programs.

The supervised practice period of the Senior Cadet Nurse is experience beyond the required program of combined theory and practice, varying from 24 to 30 months in length. It serves to satisfy certain existing requirements of most State Boards of Nurse Examiners for graduation and registration. The Senior Cadet period represents an additional six to twelve months' experience and emphasizes the service the Senior Cadet may render to the receiving institution or agency.

Any study of present systems of nursing education, and the evaluation of curricula should consider possible values accruing from the wartime accelerated basic curriculum, including a terminal supervised practice period of the Senior student.

The question might well arise as to the existence and prevalence of such basic programs as we have described. Many are attempting to enrich their programs, but very few have actually attained this broader goal.

The final determination as to whether this goal has been realized is made by joint evaluation and accreditation by the National League of Nursing Education, whose major responsibility is approval of the basic content, and by the National Organization for Public Health Nursing, whose function is to evaluate the public health nursing content of such a

program. To date, only one school of nursing, the Skidmore College Department of Nursing of New York, has been thus accredited. Several other schools are seeking this type of accreditation and it is anticipated that still others will apply within the near future.

While it is expected that increasing emphasis will be placed upon the development of basic nursing preparation at least for a long time to come, these comprehensive programs, of necessity, will produce a limited number of nurses. Therefore, increasing emphasis must be placed upon the improvement and expansion of existing postgraduate programs, especially those designed to prepare public health nursing supervisors and instructors and clinical experts in such fields as psychiatry, orthopedics, pediatrics, obstetrics, and tuberculosis.

It was mentioned earlier that careful thought should be given to the selection of recruits for public health nursing. The return of peace finds this nation face to face with the pressing needs of its civilian population. We are at a critical level of one public health nurse to every 8,000 persons. It seems a strategic time to recruit and to prepare for this growing field of endeavor. Senior Cadet experience in public health nursing has served and might continue to serve as an excellent means of securing desirable candidates for public health nursing. From information recently received from schools of nursing, and from our Public Health Service District Offices, it was learned that between July 1, 1944 and April 1, 1945, 402 Senior Cadet Nurses were assigned to public health agencies in 32 states. Of these 402 Senior Cadets, 176 were assigned to official health agencies, and 240 to visiting nurse associations. The length of experience has ranged from three to six months. The Senior student, as well as any other recruit who is to serve in public health nursing, must be chosen carefully. She must possess a degree of maturity, have an awareness of learning—teaching situations, and be able to adjust well in different situations.

Any plan to raise the level of the Nation's

health will require many more well prepared nurses than we have ever had before. A continuing program to interest and guide superior young women into the field of public health nursing is vital to such a plan. Implicit in such a recruiting program is the need for sound personnel policies and practice. Once having recruited and trained desirable personnel, the degree of stabilization and optimum functioning within an organization are usually in direct relation to the personal policies and practice of such an organization. Acceptable personnel practice should provide for freedom of action, opportunity for continuing professional growth, and economic security.

A third factor, and a very important one, affecting preparation for public health nursing is that of financial assistance for essential training.

It is realized that public health nurses of tomorrow must be even better prepared than they are at the present time. It is realized, also, that public health nursing training, like other types of professional preparation is costly. Over the years, particularly since the passage of the Social Security Act in 1936, funds for educational purposes have been increasingly available for the pursuance of public health nursing programs of study. Brief mention might be made of some currently available Federal funds that may be used for this purpose.

Under Public Law 346, Servicemen's readjustment Act of 1944, (commonly known as the "G.I. Bill of Rights") Federal aid for further study is available to nurses who are Veterans of World War II. Universities report that many nurses already released from military service are availing themselves of this opportunity for further professional preparation.

During the Federal fiscal year which ended June 30, 1945, there had been allocated from Federal Funds administered by the Public Health Service, greater amounts for public health nurse training than for any previous year. An analysis made sometime before the close of this same year revealed the following:

Source and amount of funds		No. Students
Nurse Education		
(Bolton Act)	\$809,695	2,459
Grants-in-aid		
(Social Security)	157,959	284
Venereal Disease	10,069	21
Total		2,764

In addition to the foregoing 2,764 public health nurse trainees, many more were enrolled in the different on-the-job or in-service courses financed through Bolton Act funds.

Public health nursing service is effective in relation to the number and quality of available nurses. Much of the foregoing discussion was intended to illustrate the growing need for greater numbers of well-prepared public health nurses.

In order to meet these needs every effort must be directed to the most effective and economical preparation of nurses who will assume the many new responsibilities of public health nurses in the near and remote future. The quality of service to be rendered will depend, also, upon the type of young woman attracted to the profession. Interest in the profession will be assured in terms of the durable satisfaction to be experienced and the acceptability of personnel policies and practice. There must be a salary scale commensurate with the responsibilities to be assumed and the professional preparation of the nurse, opportunities for advancement, tenure of service, and assurance of adequate retirement.

The more significant changes in store for nursing—all nursing—are geared to adjustment of medical science and medical service. The difference between public health nursing and the other branches of nursing are becoming increasingly difficult to distinguish as the imaginary line between preventive and curative medicine. Because of this blending of preventive and curative forces, it does not follow that there will be a reduction in the importance of prevention. Likewise, to insure the paramountcy of prevention, it may be necessary for sometime—and perhaps always—to maintain, within the general body of health



workers, a group having special interest in, and special preparation for, this phase of the total program.

Finally, let there be no mistaking the fact that the influence of public health nurses on the total nursing strength will be in direct relation to the size and importance of that part of the total program for which we demonstrate special fitness. It will be determined also

by the continuing contribution we make to the body of technical knowledge and tradition which, in the long run, constitutes the only justification for the existence of a distinct professional group.

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Public Health Nursing Day will not be observed in January this year; instead April 7-13 will be observed as Know Your Public Health Nurse Week.

## "Snowball's" Club Feet

By

LUCY LOPP, Field Supervisor

Crippled Children's Department

North Carolina State Board of Health

**J**UST why they called him "Snowball" no one really knew. Perhaps he did resemble a snowball as he sat in the hospital crib eyeing his new surroundings with wonder and concern, or maybe it was the contrast of his shiny chocolate skin against the white of his night gown.

"Snowball" became known to the Crippled Children's Department at one of the State orthopedic clinics when he was three years old. He had been born with deformed feet. Each foot was turned in, causing most of his weight to fall on the top surfaces; he walked with an awkward gait.

A club foot is usually the result of a congenital mal-development. There is no known means of preventing this deformity but early treatment and supervision can prevent the condition from becoming a permanent handicap. In most incidences corrective treatment can be started immediately after birth. Usually, the deformity will have been fully corrected by the time the baby is ready to walk.

Treatment consists of the application of splints or casts which are changed at regular two-week intervals. The foot is corrected slowly and gradually; treatment varies with each individual case. When the orthopedic surgeon feels a complete correction has been maintained, special shoes are recommended.

After the child receives shoes he is not discharged from the clinic, but is requested to return for periodic check-up examinations. Should the correction relapse, a second period of treatment will be required. Regular follow-up examinations may be necessary over a number of years.

In the case of 'Snowball' the clinic surgeon advised a hospital admission for a series of plaster casts and manipulations. After two months of concentrated corrective treatment he was dismissed from the hospital in plaster casts and requested to return for monthly check-ups in the orthopedic clinic where he was first examined; each time a new cast was applied. Had this case been discovered earlier, the treatment would have been much less prolonged.

After two years of continuous treatment "Snowball" was at last ready for shoes. Actually, he had to learn how to walk on his corrected feet. (In his very young mind he must have been planning a game of hide and seek with his brothers and sisters back home.) His shy, pleased smile, his hesitating steps, together with the newness of his shoes seemed to radiate a warm glow about the room. And, I kept remembering the spiritual—"All God's Chillun Got Shoes."

# Progress of Industrial Nursing In North Carolina\*

*By*

MRS. LOUISE P. EAST

Consulting Public Health Nurse  
North Carolina State Board of Health

**A**S Shakespeare said, "Coming events cast their shadows before them".

Believing that there was a promising future for this highly specialized group of nurses, a small group of interested industrial nurses met in 1937, and organized an Industrial Nurses' Section of the North Carolina State Nurses Association. At that time very little was known regarding the number of nurses in the State who were doing that type of work, and so far as was known, only 36 nurses were employed by North Carolina industries. From 1937-1942 the number gradually increased, and when a survey was made in 1942 of medical and nursing services in North Carolina industries, the number had grown to nearly 100.

During the war the employment of nurses in essential war industries was recognized as an important and necessary safeguard to workers. The number increased from 1942 until V. J. Day, to 186. Since then the war industries such as shipbuilding and munitions plants have closed, or are diminishing. Nursing staffs have likewise diminished, and the number of industrial nurses has gone back to a peace time level.

As for the future, some industries are planning expansion for peace time production. They have indicated that they intend to employ a nursing staff as soon as nurses are available. One large plant has employed a staff of nurses to visit ill absentees in the hope that absenteeism may be controlled. Five small industries have employed nurses within the past year, which indicates a recognition, on the part of industrialists, of the value of nursing service. In the past, industrialists have had no assistance in securing nurses, but when

Counseling and Placement service has been worked out in North Carolina, there will be a definite plan whereby a nurse may be guided to positions which are available. Both nurses and employers will benefit by this service.

There is more guidance and inspiration for the industrial nurse of today. In the past few years the American Association of Industrial Nurses has been organized. Many North Carolina nurses have joined this organization. There is an Industrial Nurses Section of the N.C.N.A.; also, there are four local Industrial Nurses organizations in the State. More literature is being printed on the subject than ever before. Articles appear regularly in all nurses periodicals, and a monthly magazine is printed exclusively for the benefit of industrial nurses.

Educationally, there is more promise for the future. Formerly, nurses who were employed by industry learned through the trial and error method. Some have developed excellent programs which are entirely satisfactory. Young nurses who plan to work in industries will be able to have a course in industrial hygiene and thus be better equipped when they enter this field of nursing. Several colleges and universities are offering courses of training in industrial nursing. A plan is being considered whereby courses may be offered over the entire United States in Public Health Schools, including our own Public Health School at Chapel Hill. The plan includes both short courses and longer terms of study which would entitle the student to a degree.

Some of the newer trends which are deve-

\*Paper presented at the annual convention of The North Carolina State Nurses Association and of the State League of Nursing Education, Winston-Salem, North Carolina, November 7, 1945.

loping are: a recognition of the need for positive health programs; better nutrition; medical control of diseases such as Tuberculosis, Venereal diseases, and prevention of upper respiratory infections; digestive disturbances; conservation of eyesight; improvement of plant sanitation; and adequate first aid.

The importance of pre-employment examinations and follow-up work on defects, is being recognized by management. The employee, who will become a cog in the organi-

zational set-up, is expected to have certain physical capacities for work just as machinery must meet certain specifications. The day for first aid only, by the nurse, has passed. Her field of service has broadened. She recognizes the importance of referring employees to community health agencies, and local physicians, for services not provided by the industrial physician. The door of opportunity is open for those who wish to help raise health standards in the industrial population.

## What Do You Do?

*By*

MARY RUFFIN ROBERTSON

Public Health Nurse

Orange-Person-Chatham District Health Department

"**A**RE you a graduate nurse?" "How come you don't wear a white uniform?" "Can you nurse in a hospital?" "Is you connected with the welfare department?" "Tell me, lady, just what do you do?" "What is your job?"

These and many more just like them, are questions the Public Health Nurse hears quite often. For those of you who are not quite so familiar with the "woman in blue" I'd like to tell you just a bit about the Public Health Nurse. She is a graduate registered nurse who has had at least three years of basic hospital training with from one to three years of extra training in the field of Public Health. Public Health Nurses, or PHN's, do not wear white uniforms because they would not be practical in all the traveling they have to do. In this state, all PHN's wear navy blue uniforms with the white collars. Public Health Nurses are not connected with the welfare department in any way, but they do work closely with such organizations.

As to the last two questions mentioned, teaching better health habits might be a good answer for some of our duties. Why not come with me a few days and see for yourself? Better still, why not share with me a few excerpts from my diary? These are parts of a few

days picked at random but maybe they will give you an idea of what one nurse does.

"2/19 . . . Stopped to ask a negro farmer where some of his neighbors lived. His white boss couldn't stand to stay out of the conversation and I was soon busy trying to get away from crops, weather, etc. . . . Inez is worried—her baby is nine months old and she is afraid she is 'caught' again . . . don't guess the county welfare department will be so happy about the whole thing since they are the family's whole support.

"3/1 . . . Dora's baby is not gaining . . . we weighed it before and after nursing and decided it was getting enough milk. Urged she take it to her family doctor as soon as possible to find the trouble . . . Anna is expecting another baby and sent for the nurse to come by. She came to the prenatal clinic before her other babies came and wants to come again . . . she can't remember whether this is the seventh or eighth! She wants some advice about planned parenthood as soon as this baby is born. We will give this as soon as she asks for it. . .

"4/10 . . . A young white boy came in yesterday with acute gonorrhea. Gave a fifteen year old as his contact. Visited her

and she came to clinic today and gave two more contacts—all under sixteen. Result: two cases of acute gonorrhea—high school students—wonder if we could prevent these by more sex education in our schools. . . .

"5/14 . . . Jean is still in her body cast. Am so thankful her parents took her to crippled children's clinic when they did. She must stay in the cast for several months yet but the doctor says she will walk later. Showed her mother how to prevent pressure sores on her toes and heels . . . baby brother is gaining nicely. . . .

"6/23 . . . Typhoid clinics have begun and I gave over three hundred vaccinations today . . . also gave some diphtheria toxoid and some whooping cough vaccine. . . .

"7/25 . . . Quarantined baby for typhoid fever today. Have worked with sanitarian trying to find source of infection . . . have warned all possible contacts . . . fluoroscopic clinic this afternoon . . . about thirty con-

tacts and suspects to be fluoroscoped for tuberculosis . . . one active case admitted to sanatorium yesterday after a few weeks wait . . . showed family how to clean room and contents . . . unable to find family today, old record reads, 'turn right at Adkins barn' . . . am still wondering where Adkins barn is!

"8/22 . . . Midwife classes are always a problem but we must keep them under supervision . . . they teach us too!

"9/20 . . . School is under way and so are our school clinics . . . Wish more of the children had attended pre-school clinic last spring. Made a visit to Clyde's home today to talk with his mother about the rupture we found on him at school exams last week. She promised to see her doctor soon . . ."

Much more could be said about the duties of the PHN but perhaps from the few things listed here you now have an idea what a problem it is to answer "What Do You Do?"

## "Me -- and You"

*By*

H. LILLIAN BAYLEY, R. N.

Consulting Public Health Nurse  
North Carolina State Board of Health

**A**RE you asking me! Do people ask you, as nurse, teacher, parent, minister or friend how to answer the everlasting questions about the stork, the pin-up girls, the priority sweethearts and the V-Mail brides?

Perhaps you would like to read the story of how help with sex education has been given to parents and children in several counties through library facilities and the Public Health Nurses.

Several years ago the writer at a professional dinner sat next to Miss Marjorie Beal, Secretary and Director of the North Carolina Library Commission. During the conversation Miss Beal learned of the need for a traveling library of technical books to be used by Public Health Nurses. Like rubbing Alladin's Lamp, within a few weeks with the help of Miss

Mary S. Yates, Head of Traveling Libraries, the books were on their way to the nurses and have been circulating ever since.

These books have been used by the nurses and some teachers in several counties; as a reference set for two formal extension courses on family living, by the Parent Teachers Associations of two large schools, and are now in use in a school whose teachers and Parent Teacher Association have read and approved the books for school use. There are now more requests from nurses, teachers and health educators for the books than the supply affords. Because of the unfulfilled requests the Library Commission is adding two more sets of books on sex education, which are to be sent to local libraries upon the request of interested nurses or persons. The books will be

left in the libraries for two months and may be taken out in the usual way by parents, young people and children with the assistance of the local librarian.

Any group wishing to buy the set of books may do so for about \$35.00. No book costs more than \$2.50, and some pamphlets cost only 25¢. If each local county paper could reprint this article many more people would learn of and utilize the books.

The following is a short description of most of the books:

**The New Baby** by Bell, Evelyn S. and Foragh, Elizabeth; J. B. Lippincott & Company, East Washington Square, Philadelphia, Pa.

A photographic book for children age three to five. The story is simply told and will assist parents to properly begin the sex education of their children.

**The Story of a Baby** by Ets, Marie Hall; the Viking Press, 18 East 48th Street, New York. A good book for children from age four to eight. Drawings illustrate pre-natal growth and is of interest to children.

**Being Born** by Strain, Frances B.; Appleton Century Company, 35 West 32nd Street, New York.

Very well written for information on reproduction, sex behavior and conduct for pre-adolescents and adolescents.

**The Wonder of Life** by Levine, Milton I. and Seligman, Jean H.; Simon & Schuster, 1230 6th Avenue, New York.

Simply written for pre-adolescents and adolescents.

**Love at the Threshold** by Strain, Frances B., D. Appleton-Century Company, 35 West 32nd Street, New York.

Especially for younger people who are looking forward to marriage.

**Petting, Wise or Otherwise** by Clark, Edwin L.; Association Press, 347 Madison Avenue, New York.

Relation of petting to sexual activities.

**Attaining Womanhood and Attaining Manhood** by Cowen, George M.; Harper Brothers, 49 East 33rd Street, New York.

Two books written for boys and girls of age twelve to sixteen.

**Looking Toward Marriage** by Johnson, Randolph Pixley; Allyn and Bacon, 181 Peachtree Street, Atlanta, Georgia.

Especially interesting to high school age.

**Sex Adjustments of Young Men** by Kirkendall, Lester; Harper and Brothers, 49 East 33rd Street, New York.

For young men and boys.

**Modern Marriage** by Popenoe; MacMillan Company

**Questions Girls Ask** by Welshimer, Helen; E. P. Dutton & Company, 300 4th Avenue, New York.

**Life's Intimate Relationships** by Johnson, Talmadge C.; Abingdon & Cokesbury Press, Nashville or New York.

An interesting book on the principles of better living.

## Opportunities In Public Health Nursing

By

AMY LOUISE FISHER, R. N.

Supervising Public Health Nurse

North Carolina State Board of Health

A NUMBER of people have asked lately, "Now that the war is over, what is going to happen to all the Cadet Nurses the Government has been training? Will there be jobs for them all?" Yes, there is still a critical

shortage of nurses in almost every field. There are more than 50 Public Health Nursing vacancies in North Carolina. Another 75 jobs are now being filled by War Emergency Nurses, many of whom are expecting husbands



or sweethearts home and will be giving up their jobs when the men get back to the United States. A number of these War Emergency Nurses will want to stay in Public Health and will be given scholarships for the course in Public Health Nursing if they are eligible for this training. Even with the jobs all filled North Carolina has a ratio of only 1 public health nurse for 10,300 population. In order to meet the minimum requirements of 1 nurse per 5,000 population North Carolina will need approximately 350 more staff nurses and 55 consultants and supervisors. There are still 7 of the 100 counties that do not have health departments. If all of the people in North Carolina are to have the benefit of health protection in the form of services by an organized health department there will be room for many more nurses in public health nursing in this State.

How may a nurse qualify as a public health nurse? Does the blue uniform she wears indicate that she is not a graduate nurse? No, indeed! The public health nurse is a graduate registered nurse. She must have a high school education; college work is desirable. She must have graduated from an accredited school of nursing and be eligible for matriculation in a college or university offering a course in Public Health Nursing approved by the National Organization for Public Health Nursing. This post-graduate course consists of a year of study. Scholarships are available through the State Board of Health. If you are a nurse and meet the requirements you will find an interesting and satisfying career in this field of nursing. If you are still in high school or college and considering nursing be sure that you select carefully and wisely the school of nursing so that when you have finished the three years of training you will be able to enter any field of nursing you may choose. Advice and help will be given you gladly by Miss Bessie Chapman, Secretary of the State Board of Nurse Examiners, or by Miss Virginia Miles of the North Carolina Counseling and Placement Service. Their offices are located at 415 and 419 Commercial Building, Raleigh, North Carolina. The Counseling and Place-

ment Service is a new project of the North Carolina State Nurses Association, which was begun January 1.

You may wonder why it is so important for a girl who wants to become a public health nurse to select a good nursing school and then to have post-graduate work in public health nursing. She who enters this field needs the best possible preparation because she must be both nurse and health teacher. Like other nurses she aids in treatment, but her chief concern is prevention. She promotes the physical health of her patient and in addition his mental, social and emotional well-being. She needs to know and bring together all community resources needed for helping solve the social and economic problems that are so closely allied with sickness. The public health nurse needs to like people and know how to get along with them because her work brings her in contact with all sorts and kind of people—in homes, in schools, in clinics and industrial groups. She works closely with physicians, hospitals, health and welfare agencies.

The opportunities for service are varied enough to make life interesting and to demand the best a nurse has to give. Public health nurses are doing everything possible to see that babies get the right start in life—this includes seeing that the baby is wanted and planned for—that the mother gets good care before and after the baby comes, either by her family physician or in a clinic. The nurses participate in the program of prevention through immunization for whooping cough, diphtheria, smallpox and typhoid fever. They play an important part in all communicable disease control including tuberculosis and venereal diseases. They offer health supervision for infants, pre-school and school children and work with adults. Many public health nurses find work with crippled children one of the most satisfying services they can offer. In short, public health nursing includes anything that will help promote the health and welfare of all the people in the State.

Nursing is a proud profession, and Public Health Nursing is one of the most interesting and satisfying fields of nursing.

# Amanda Bunch -- Midwife

*By*

IDA H. HALL, P. H. N.

Wake County Health Department

Raleigh, North Carolina

**A**UNT Amanda died last week after forty-one years service as midwife in one community. It seems a pity that the story of Aunt Amanda was not written while she was alive, she would have been so proud of it. She was proud to be a midwife and she had a record to be proud of, and of her starched white mop-cap and apron that she always put on a-fresh when-ever she went out excepting for church.

The records kept since 1934 show that she delivered more than a thousand babies during this time. In one month in 1937 she had thirty deliveries and helped a doctor on two more. She 'helped-out' the doctors and they helped her out, and when she had to call a doctor he never delayed. Every doctor seemed to feel the same respect and personal affection for her and during her illness this last year they voluntarily gave her their best attention.

Three fully equipped bags were kept in order by her and a good supply of extras for emergencies were folded away in a trunk. Sometimes she cared for three deliveries in twenty-four hours often she had several slow cases on at the same time and would shuttle between them. She appreciated her importance through-out several townships and in adjoining counties and she felt apologetic when she missed a call, not because she lost a fee, but felt as if she had let someone down. Sometimes she would grumble when she saw a man wasting money while in debt to her and

once in a while employed a collector. She said there were no hard feelings but folks shouldn't get too careless.

At Prenatal Clinics she was welcomed by everybody and the Clinician treated her as an equal and had her feel and listen to interesting conditions. She often said that she was still learning. The doctor would often have a little chat with her on the side regarding their latest fishing luck.

No home was too poor and dirty for her to do a good job, leaving the patients neatly fixed up and in a good state of mind. Her automobiles were not much satisfaction to her as she never tried to drive and her grandsons took them out, got drunk and wrecked them and then sent for her to bail them out of jail. She was mighty proud that her friends lent her the needed money so cheerfully.

Aunt Amanda had something that few people have, an extra sense of understanding that did not require going into detail. She said little, listened and observed closely and spoke everybody's language. Her success was remarkable.

Her skin was the color of a new penny. There was a little hump in her nose and she thought she was part Indian. Her seventy-four years were full of hard work, self sacrifice and charity for all. Love and esteem were expressed by the immense crowd including many white people that attended her funeral and heaped her grave with flowers.

## Exhibits

By

H. LILLIAN BAYLEY, R. N.

Consulting Public Health Nurse

North Carolina State Board of Health

**S**URVEYS! Surveys! Surveys!! How about making exhibits to show the general public what has been happening in your county? Any interested group could secure the necessary information from their local county health department.

Several attractive Lanham Act health department buildings have had formal openings during the past three years, and at some of those health department functions exhibits of the content and results of the personnel's work was shown. The interest of the visitors in the exhibits was a surprise, even to the health department personnel.

Realizing that there is a need for child health planning in the post-war world, the American Academy of Pediatrics is undertaking a national study of child health facilities services. The U. S. Public Health Service

and Children's Bureau are cooperating as members of the executive committee. North Carolina has been chosen as the first state and the study is already underway, sponsored by the North Carolina Pediatric Society. The North Carolina State Board of Health is throwing its full cooperation behind the study. Lay and official agencies have been informed of this survey which to quote, "The survey will cover the extent and quality of such services as child health conferences, school health services, medical care programs, immunization services, child guidance services and public health nursing." It is hoped that by knowing of the study, groups will become interested in child health in their own community.

How about making one or more of the following exhibits to show the health problems in your county?

## Maternity Poster



Show the number of new mothers in your county during 1944 or 1945 by using a poster with similar figures to that in the margin for each new mother. This will cover about 3x5 square feet according to the number of mothers represented. Building board is best and cheapest for the poster board, and pink is a good color for the figures, which may be printed in sheets.



In comparison, show the number of mothers under medical care, mothers under private medical care, and health department supervision should be counted. This will cover a smaller space than the total mothers. Blue is a good contrasting color for these figures.



In the last space show figures in solid black to denote the maternal deaths during the year.



### Infant Poster



Show the number of new babies in your county during 1944 or 1945 by using a large poster board and pink figures like that in the margin for each live birth.



In comparison, show in blue figures the number of babies under medical care by private physicians or health departments.



In solid black figures show the number of infant deaths under one year during 1944 or 1945.



Henry Flud Campbell, age 22 months, son of Mr. and Mrs. John H. Campbell, Reedville, Virginia. The Mother, the former Miss Theodosia Flud, is remembered pleasantly as a public health nurse in North Carolina.

### Immunization Poster



Show number of babies under one year carried to clinics or private physicians to be immunized against whooping cough during 1944 or 1945. These figures may be in yellow, and one figure should represent one immunization.

In similar manner show by pink figures the number of babies vaccinated for smallpox.

By blue figures represent the babies immunized for diphtheria. This poster should be shown in combination with the infant poster.



For the pre-school age show figures like the one in the margin. Show yellow figures for whooping cough immunization, pink figures for smallpox vaccinations, blue figures for diphtheria immunizations.

### Nursing Visits

A poster showing number of Public Health Nursing Visits to prenatal cases, to infants, to pre-school children and instructive visits for immunization should be of real interest to the public.

Samples of the colored figures in mimeographed sheets of about twenty-four figures to a sheet may be procured by writing the Mailing Room of the North Carolina State Board of Health.

## The Premature Infant

By

MABEL PATTON, R. N.

Consulting Public Health Nurse

North Carolina State Board of Health

**H**OW many premature babies were born in your county last year, last month? Vital Statistics show that 90,481 babies were

born in North Carolina in 1944. Of this number approximately 4,524 were premature. Many of the babies who die under one month

of age are born prematurely. These infant deaths should be of concern to everyone in North Carolina. You should be interested in knowing not only how many stillbirths and maternal deaths occur in your county, but also the number of babies born prematurely.

If your family was one of the homes to which a premature baby was born, did you report it to your County Health Department? Your Health Department is anxious to give special assistance to families in the care of premature infants. Three points must be kept in mind constantly when caring for a premature baby

1. To keep the baby warm

### Suggestions In Regard to the Care of the Premature Infant In the Home

1. Preparation before birth of the infant.

The following equipment should be ready for the baby's birth:

- a. A warm blanket and heated bed (80°-90°F.) for reception of the infant.
- b. A rubber bulb (ear syringe) for aspiration of mucus.

(Necessary stimulants will be prescribed by the doctor.)

2. Provision of space for care of the infant in the home: a small, separate room is preferable; room temperature at 75°-80°F. day and night.

3. The following individual equipment is needed for care of the infant:

- a. Rectal thermometer.
- b. Feeding equipment—medicine dropper and glass, small nursing bottle. (Use aseptic technique in preparing the infant's feeding. Boil all utensils 10 minutes in a covered container.)
- c. Covered pail for soiled diapers.
- d. Oil and cotton.

4. Special measures for protecting the infant from infection.

- a. Nurse to wash hands with soap and running water—

- (1) Before handling infant.
- (2) Before feeding infant.
- (3) After diapering infant.

- b. Person caring for the infant must wear a

2. To protect him from infection

3. To feed him properly

A simple premature bed is necessary in caring for the infant. A pasteboard box lined with screw top bottles (pint size) filled with warm water may be used temporarily in the home or for transporting the baby to the hospital. If any of you develop a premature bed that proves to be adequate and practical, please share your plans with the Division of Maternity and Infancy, State Board of Health, Raleigh.

The Children's Bureau, Washington, D. C., is also interested in our problem and gave us the following helpful suggestions:

clean gown or apron. (No one with respiratory or other infections should care for the infant.)

- c. Keep all members of the family who have infections (respiratory or skin infections or diarrheal diseases) away from the baby and exclude all visitors and all children.

- d. Keep mosquito netting over the bassinet or incubator, if it is of the open type.

- e. See that the baby's room and furniture are clean.

(1) Floors must be mopped with a damp mop.

(2) Furniture must be wiped with a cloth.

(3) No sweeping of floors or dry dusting of furniture should be allowed.

5. Care of the baby's skin.

It is not considered desirable to bathe a premature baby with soap and water or with oil for the first 24 hours after birth. He need not be bathed for a week or 10 days or longer. Apply mineral oil gently to folds of skin in soiled areas when changing diapers.

6. Directions should be obtained from the physician caring for infant in regard to method, type, and interval of feeding.

Bottles must be held by an attendant; an infant fed in the incubator should be fed with his head and shoulders elevated.



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Walkways that Lead from the State Laboratory of Hygiene to  
the State Board of Health



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### FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

### SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters.)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
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# THE Health Bulletin



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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

## 1946 Public Health Objectives

BY CARL V. REYNOLDS, M. D.

Secretary and State Health Officer  
North Carolina State Board of Health

WE have crossed the threshold of a new year. We have heard many sentiments expressed about 1946, some of which have been repetitions of what we have been hearing all our lives. There are certain stock phrases that are taken from the trunk of remembrance every Christmas, New Year's Day, Fourth of July—and so on—and then put back into the moth balls for future use. But, like Christmas tree bulbs, they sometimes burn out, and it would be fortunate if some of them could not be replaced.

Sentiment has no place in the beginning of a new year. We might as well be realistic about the matter. Threadbare phrases, like threadbare fabric, will not stand the test of rough usage.

No new year should be treated like the newborn babe it is all too often pictured to be. It should hold the accumulated experiences of the past, and these experiences should be translated into action that in no sense resembles child's play.

As we enter 1946, there is probably no better admonition for us than that given by the poet Richard Horne:

"Be rigid, plowman; bear in mind  
Your labor is for future hours.

Advance, spare not, nor look behind!  
Plow deep and straight with all your powers!"

We must know the past to appreciate the present—and to prepare for the future. But we must not live in the past. To do so is to display evidences of senility. To look ahead is an evidence of youth, vision, and vigor.

In no field is an appreciation of the

value of future responsibilities more essential than in the field of Public Health, which is dedicated to human betterment. For the future, we must have definite objectives. The world will no longer be satisfied with vague generalities. We have just waged a war for the preservation of the fundamental rights of mankind; but these fundamentals, if they are to prove worthy of the price we paid for their preservation, must be put to work for human betterment and must be a part of any peace formula we adopt, if that formula is to endure.

We have laid the foundations of Public Health. These foundations are solid and, we believe, enduring, but unless we build a suitable superstructure, our efforts will have been put forth in vain.

We in North Carolina propose, among other things, to so enlarge our program for the eradication of syphilis that it will reach those suffering with neurosyphilis, fifty per cent of whom, if neglected, become fit subjects for our mental institutions—wards, rather than citizens, of the State. If properly treated, 85 per cent can be restored to useful citizenship. This expanded program will be launched when suitable space is secured.

Moreover, we will make a survey of certain groups covering the entire population of these groups, for the diagnosis and treatment of early, latent, and late latent syphilis, with a view to curing promptly those that are curable and treating those suffering with neurosyphilis as their condition may indicate.

The time for resolutions concerning this and associated problems has passed. The time for action is here.

We propose also to make considerable headway during the year 1946 in a state-wide survey, to locate the unknown cases of tuberculosis and to secure, as nearly as possible, a complete picture of the tuberculosis situation in North Carolina among the body politic, with a view to the adoption of remedial measures. We are prepared and equipped for such an extensive survey, which will begin as soon as shipments of the means for carrying it out arrive. The object, of course, is to make hospitalization available for all open, or infectious cases, in order that we may prevent carriers from giving the disease to others. At the same time, we propose to give the sick the opportunity of being restored to health.

In the matter of cancer control, we are ambitious to start, as early as possible, clinics where we can have specialists ready, at definitely located places, to examine all cases, regardless of race, creed, or economic status, to determine the presence of cancer, with the fervent hope that ways and means will be found to have these cases diagnosed and treated promptly, thus making a valuable contribution to prevent the patients from reaching the incurable stage. Research, of course, will continue—but the disease in its early and curable stages should, at the same time, be diagnosed. We should not await the results of research, but move swiftly to effect those cures that can be made with the knowledge which we already possess. Hence, the necessity for adequate diagnostic clinic facilities—now.

It is heartening to note that, as this is being prepared, the United States Senate already has passed what is known as Senate Bill 191, which would provide Federal aid to the States for expanded hospital facilities, public health centers and better medical care for all people. The measure now goes to the House of Representatives, and it is to be earnestly hoped that it soon will have passed both branches of Congress and be ready for President Truman's signature, to make it become law, in order that it may be put into effect speedily.

Passage of this measure will advance medical care at least ten years and provide all our people with services to

which they are entitled but which they have never, up to this time, enjoyed. By the enactment into law of this measure, many more of our doctors will be able to practice medicine as it should be practiced, that is, in well equipped hospitals and with consultants conveniently and immediately available.

My earnest hope is that the people, as individuals, will become less individualistic and have a part in public health advancement, being sufficiently interested to analyze the health needs of the communities and of the State as a whole, and then insist on the appropriation of funds sufficient to meet these needs.

This is a matter in which our returning service men can render assistance as citizens of the Republic they fought to preserve. As members of the armed forces, they were provided with protective measures and given the best medical care, even though, in many instances, it was necessary to curtail medical facilities available to the civilian population. This was as it should be—but it should not be forgotten that those who fought our battles abroad are also citizens at home. Not only should they continue to enjoy the degree of medical care that was provided for them while in uniform, but they should insist on its continuance now that they are back home—not only for themselves, but for their mothers, fathers and other family connections who were not called upon to fight, as they were.

We protected our service men, in order that they might fight and die, if necessary, to save us. We should continue that protection, in order that they may live the more abundant life they fought to insure.

A merciful Providence, together with vigilance on the part of Public Health workers and those engaged in the private practice of preventive and curative medicine who remained to work on the home front, saved us from serious or widespread epidemics while the fate of civilization hung in the balance.

Every citizen in this government of the people, for the people and by the people, is entitled not only to life, liberty and the pursuit of happiness, but also to good health, in order that he or she may be physically and mentally fit to enjoy these unalienable rights



and compete for their rightful place in the world.

Abraham Lincoln declared this nation could not survive half slave and half free. Neither can it reach the highest peak of potential efficiency half sick and half well.

Let each of us, therefore, determine that during 1946 we will make our contribution toward ushering in an era not

only of lasting peace, but of good health, on a permanent basis.

The hospital and medical care we need cannot be provided without the necessary funds. Therefore, it is incumbent upon those who provide the tax dollar to insist that a sufficient amount of revenue be appropriated to insure health as a basic right and not as a charity.

## \*Reconversion Of The Family— A First Post-War Task

**A**LL through history, even when a society broke down, the family remained intact. A new society was built upon the remaining family units.

The German High Command, in their study of history, recognized this fact and throughout the war did everything possible in the conquered countries to destroy family life and thus make the re-establishment of a strong society a much more difficult problem.

How well they succeeded is being discovered in every country of Europe, including the blasted remains of their own land. The chaos of these postwar years will continue until family units can be re-established in every country and family loyalties reaffirmed.

Even in this relatively untouched America of ours, the family has been put to a stern test during four long years of war. The drafting of fathers, the break up of families when both parents engaged in war work, the loosening of family ties when mothers gave up their home tasks and concentrated on being nurses' aides or air raid wardens or war bond solicitors weakened the forces of the family in our Nation's affairs.

### Reconversion of the Family

The first big postwar task is reconversion of the family and the re-establishment of family ties. The returning veteran may find difficulty in settling down with his wife and children. The woman war worker may give up her high wages and go back to her husband and her children with a feeling of being let down. Young people who have left school to make big wages in the

war plants may not want to return to their scholastic life and the usual peacetime disciplines of family living. Venereal disease is rife among young people of marriageable age. Restlessness, lowered moral standards, lack of adequate housing, strikes, insecurity about the future—all these tend to weaken family ties and the home therefore loses much of its vital force which is so necessary to the stability of our society.

### A Challenge to United Efforts

This gloomy situation should not be a cause for defeatism. The family is tough and resilient. It has great comeback powers. The situation is a challenge to education, religion, medicine, public health and allied fields. We in obstetrics are in an unique position—for the coming of babies can be one of the strongest ties in knitting families together. We are operating at the very center and core of our Nation's vitality and strength.

We need no reconversion policies, nor do we have thorny roads back to peacetime activities. Our task is to stay on the same course which was charted nearly thirty years ago. Even the war did not affect the chief goals of obstetrics. Just after Pearl Harbor, the Maternity Center Association was continually asked the question, "What will your war work be?" Our answer was firm and sure for we knew exactly what should be done during those days of severe national crisis. We answered in the January 1942 issue of *BRIEFS* as follows:

"We will sit at the bedsides of the women in labor as we continue to train more women in midwifery to send out to rural areas; we will teach

\*Reprinted by permission from *BRIEFS*, Maternity Center Association, 654 Madison Ave., New York 21, New York.

the mothers and fathers who are having babies how to be good parents, how to make the most of their family living; we will continue to provide the best techniques, the best short cuts in maternity care for nurses and other workers throughout the United States. We will keep the home fires burning.

"As we list for these enquirers the things we will do in this war, their interest lags. We could be discouraged until we remember that thousands of strong, vigorous, confident boys who man our anti-aircraft guns in 1942, who fly the planes, who build the tanks, who launch the ships, are the babies we took care of in 1917."

That was true of everyone who worked for better maternity care during those bitter years before and during World War II. The wartime job was well done despite the dislocations of medical, nursing and hospital care. Maternal mortality was driven to the lowest point in history, while our national fortunes were at the lowest ebb. Many mothers were saved for their families so in need of their loving care and a firm hand on the tiller while Dad was away. Good maternity care protected the family.

That is just as true today. There is no need to change bearings on our postwar course. If we carry our knowledge about obstetrics into the far corners of the land and to every mother in the most remote nooks and crannies of big city and country crossroads alike, we should soon come to the time when there would be no NEEDLESS maternity deaths.

But the putting into practice of this knowledge alone will not provide the best contribution which obstetrics can make to stronger family life in the United States. The progress we have made in the past three decades especially has been based on the prevention and cure of pathological conditions. If we are to make the most of our opportunities in strengthening family life by means of maternity care, we must do more than merely prevent disease. We must promote health, not only of body but of mind and spirit.

Today's life-saving maternity care offers very little to the expectant parent in the way of education for family living or for positive teaching of any kind. A mother goes to her doctor early

in pregnancy, often in response to our educational efforts. Frequently she goes in fear, expecting the doctor to examine her from head to toe—looking for pathological conditions. This he does, and in addition, he asks many questions about her illness history since she was a child. She goes in trepidation because she fears the doctor will find something wrong. His conversation with her may be chiefly concerned with questions and advice about physical things such as spots before the eyes or blood pressure or bowel movements. She comes home dishevelled not only in coiffure and dress, but also in mind and spirit. The inner radiance which first came upon her when she knew that she was going to have a baby may have been dampened or dispelled by such an attitude.

**Here at one of the moments in life when a person is most teachable, the opportunity of teaching is let slip by.**

In obstetric care, we are not dealing with one isolated woman in an isolated moment of time, but with a human being with family ties, hopes desires, fears, upon whose health and happiness the health and happiness of other people depends. We cannot glibly repeat the old adage that the coming of a baby will weld her home more closely together. It can do just the opposite if parents are untaught and unprepared for the physical and emotional experiences during pregnancy, at labor and afterward.

**That is why we in obstetrics hold the key to the strength or weakness of many families whose children are now being born under the tensions and uncertainties of a chaotic era in history. We have knowledge, which when applied, can build great security, but we are not putting it to work in people's minds and hearts.**

We have the knowledge about how babies come, how they are conceived, how they grow within the mother's uterus and are born. We know about planning for the coming of babies. We know about the physical and psychological problems of marital adjustments—and we know some of the answers. We know how to fit the new baby physically and psychologically into the family. We know that the joyful coming of a baby depends upon attitudes and habits created in the formative years—



long before a young person becomes an expectant parent.

We know all this and more and we know it should be taught to young people **BEFORE** they are married. We know that it isn't taught. We sit back and bemoan this condition, but do very little about it. Prudery is still the greatest enemy of progress, of constructive, positive teaching in the field of obstetrics, and will continue to block the dissemination of this essential information for sound family living until a concerted effort is launched to blast it forever from its entrenched position at the crossroads of public opinion.

When the taboos are blasted and young people learn these facts and put them into practice in their own family living, the happy story portrayed in the pictures in this issue of **BRIEFS** will be the usual result. First, expectant parents plan together for the coming of the baby. They work out their family budget, with items for doctor, nurse and hospital and they select the

best medical and hospital care within the power of their pocketbook. The wife goes to the doctor not in fear and trepidation but with confidence, knowing that he is well trained and experienced and together they work out her prescription for living.

Then the months quickly pass and the mother is well instructed on how she should live, what she should do, what she should eat at different stages of pregnancy. Father, on the other hand, goes to class or reads a good book which fits him for the changes that are coming in his relationship to his wife. When the baby comes, father fits into his place without friction or jealousy and he can carry his share of the responsibilities in the care of the baby. Under such an attitude, we develop an understanding team of doctor and nurse, mother and father, and we help to build strongly and well another family unit which will contribute to the strength of our Nation in the years ahead.

## A Comprehensive Program for Nationwide Action in the Field of Nursing \*

### Introduction

**T**HE outline of a comprehensive program for nationwide action in nursing is the outgrowth of a war program of cooperative activity which nursing organizations have carried on since 1940.

As the war has progressed, they have become increasingly aware that coordinated action in nursing will be quite as important during the post-war era as it has proved to be during the war period. Each national nursing organization set up its own Planning Committee. All have recognized, however, that the nursing profession could make its leadership most effective by developing a comprehensive program. As a first step, the National Nursing Council for War Service appointed a Committee on Domestic and Postwar Planning in November 1943.

In April 1944, this Committee became the National Nursing Planning Com-

mittee. The Committee is now composed of the presidents, executive secretaries, and planning committee chairmen of five national nursing organizations; representatives from the American Association of Industrial Nurses and the National Association for Practical Nurse Education; directors of the nursing divisions of the American Red Cross and of certain federal agencies; and the chairman and executive secretary of the National Nursing Council for War Service.

At its initial meetings, the Committee outlined ten objectives toward which nursing activities should be focused. It defined five areas in which programs for study and action should be developed. These areas are:

1. Maintenance and Development of Nursing Services (in hospitals, sanatoria, and other institutions; in private practice; in public health and industry; and in other fields)
2. A program of Nursing Education (Professional—basic and advanced—and practical)

\*Prepared and issued by the National Nursing Planning Committee of the National Nursing Council for War Service, Inc., 1790 Broadway, New York.

### 3. Channels and Means for **Distribution** of Nursing Services

4. Implementation of Standards (including legislation) to Protect the Best Interests of the Public and the Nurse

### 5. Information and Public Relations Program

To provide a basis for coordinated activity in these areas, individual plans and suggestions were made by all members of the Committee for incorporation into one composite program.

Before preparing the outline of this program, all the proposals presented were carefully studied. Many duplications appeared. These duplications are significant because they indicate the extent to which the individual organizations are aware of problems in their own fields which are common to all fields of nursing. Also significant is the emphasis placed on the need for urgency in getting work under way.

The individual plans, broadened sometimes to cover all fields of nursing instead of merely the ones in which particular organizations are interested, fitted easily into the four areas of study and action. The final composite program incorporates plans and suggestions made by all the organizations and interests represented in the National Nursing Planning Committee. The program relates to all nurses—professional and practical, Negro and white, men and women.

The composite program takes into consideration the increase in the responsibilities shouldered by professional nurses as a result of the war emergency and the effective use which has been made of practical nurses, other paid workers of various types, American Red Cross Volunteer Nurses' Aides, other volunteers, WACS and WAVES. It recognizes the increased need for well-prepared nurses which will result from the expansion of hospital and health facilities proposed by the U. S. Public Health Service, the plans of the U. S. Children's Bureau for increased activity in maternal and child health, the necessary enlargement of Veterans' Facilities (particularly in psychiatry and tuberculosis), and the probably inclusion of home nursing in medical care insurance (voluntary and governmental). It points out the need for study to overcome the gaps and inadequacies in

prewar nursing service and nursing education which war demands have highlighted.

While the outline may not mention specifically every phase of the nursing problems on which one organization or another considered study and action necessary, these are, nevertheless, covered by more general statements. For example, several plans emphasize the need for more specialists in nursing—in public health, in psychiatry, in tuberculosis, in obstetrics, in teaching and supervision, and in other fields—and for the development of more and better programs for the preparation of such specialists. The importance of preparing nurses to carry on the many special techniques and procedures that are a part of modern medical treatment was also stressed.

Some projects are national in scope, as for example, accreditation, curriculum revision, and the study of selected aspects of nursing education. Others, like the counseling and placement bureaus, will be developed nationally, regionally, and locally. The nursing service bureaus and the community nursing councils are primarily community projects, to be stimulated and guided by the national organizations.

The outline does not go into detail; the statements and phrases under each section are often no more than suggestions of plans or ideas which can be developed according to the ability, imagination, financial resources, and enthusiasm for community welfare present in each responsible group. It is believed that the program is sufficiently flexible to permit development of individual projects within each area, or within one or more areas, sometimes as units of a larger study, sometimes separately. Some part of each section may be started without delay. No individual project needs to wait for the initiation of the program as a whole. A number of projects, in fact, are already under way or have been active for several years; some are being initiated; others are still to be undertaken. The composite program represents the expansion of existing projects considered necessary for effective progress, together with the introduction of new projects which must be undertaken if present and future needs in nursing are to be met satisfactorily.

**OBJECTIVES**

(Approved in principle September 16, 1944)

The professional nursing organizations have established the National Nursing Planning Committee as a coordinating body to plan and promote a five-year program for nationwide action in the field of nursing.

Effective implementation of this program will enable the profession to provide and maintain a high level of nursing service wherever it is needed.

To achieve these objectives within the next five years, the following action will be taken:

1. Determination of the needs of the nation for nursing care.

2. Determination of the number of nurses required to meet immediate needs for all types of nursing care.

3. Provision for meeting additional needs as social programs advance.

4. Education of nurses to give the best service which current scientific knowledge makes possible.

5. Promotion, development, and adoption of personnel policies and practices which will be satisfactory to employer and employee, and will ensure remuneration commensurate with the services rendered to society.

6. Promotion and support of plans to assure nursing care to all who need it, through an equitable distribution of the service cost.

7. Promotion, development, and establishment of standards to guard the public and the nurse.

8. Development of public understanding that the essential part which nursing plays in healing the sick and promoting positive health

warrants use and support of a comprehensive community nursing program.

9. Development of a progressive program of information to help nurses understand and accept their responsibilities and opportunities.

10. Support of the program outlined without regard to race, creed, color, economic status, or geographic location.

## **STATE AND LOCAL DEVELOPMENT OF THE COMPREHENSIVE PROGRAM IN NORTH CAROLINA**

Plans of the program were discussed at the annual convention of the North Carolina State Nurses' Association in Winston-Salem, November 5, 6, 7, 1945.

The Board of Directors recommended, and the recommendation was acted upon; that the outline of "A Comprehensive Program for Nationwide Action in the Field of Nursing" be studied on a district basis by special committees of each district and lay representatives. That: The North Carolina Nursing Council for War Service be discontinued and that the work of the Council be delegated to the Post-War Planning Committee of the North Carolina State Nurses' Association, and that the membership of this committee be expanded to include representatives from other professional organizations and lay groups. A complete outline of the program was printed in the September, 1945 issue of *The American Journal of Nursing*. Mrs. Louise P. East, Consulting Public Health Nurse, is Chairman of this Post-War Planning Committee of the North Carolina State Nurses' Association.

## **Accidents**

THOSE of us who are interested in conserving human life are distressed at the heavy toll which accidents take in deaths and serious injury. In the few months since the end of the war automobile accidents have increased some 40%. It is not known just what part unlimited gas and the increase in speed limit has played in this up-surge of highway accidents. Antiquated vehicles and their poor mechanical condition also enter into the picture. Another factor which cannot be overlook-

ed is the "devil-may-care" attitude of our people. With the coming of winter the weather will also contribute markedly to the hazards of highways and streets. We, in North Carolina, should heed the timely warning issued by the Connecticut State Department of Health, which reads as follows:

### **Open Garage Doors Before Starting Engine**

With the coming of colder weather the annual warning against carbon monoxide is in order.



This gas is odorless and colorless, so unless special warning is at hand the careless person is apt to think nothing of it. Carbon monoxide—CO to the chemist, is present in the exhaust gases from the family car. Although this gas is present at all times, usually garage doors are flung open and remain so while the engine is being warmed up for a quick get-away.

But when the mornings turn cold there is more tendency to close garage doors and so allow these exhaust gases to accumulate. This is especially dangerous in a small garage. Even a small car in a closed garage will generate enough carbon monoxide to render a person helpless.

The action of carbon monoxide is insidious. It has a stronger affinity for hemoglobin than has oxygen, so the oxygen is quickly displaced leaving the hemoglobin without power to carry needed oxygen to the tissues. This change will have come about without being apparent to the person. At first a slight headache or muscular weakness may be noticeable, though the victim may not feel the effect of this until he starts to move or exercise, when he becomes helpless and falls. He soon becomes unconscious and death may follow rapidly unless he is removed quickly to the open air for first-aid resuscita-



tion measures which should include the use of an inhalator from the nearest available station.

### Play Safe

To avoid this treacherous and deadly gas, observe the simple procedure of opening your garage doors before starting the engine, and keep them open until the car has been driven from the garage or the engine stopped. Furthermore, be sure that your garage doors are equipped with substantial hardware to keep them open even in the face of a brisk wind. Cold weather warnings should also be heeded in the case of closed car windows. No car with engine going should be entirely closed no matter how low the temperature outside.

Carbon monoxide may be present in the exhaust gases which have seeped through the car because of some defect in the exhaust system. With proper ventilation in the car, the minute amount present would cause no ill effect, but with windows closed an accumulated amount may be enough to jeopardize the health or even life of the occupants. Be sure and keep car window open while driving.

### Guarding Against Home Accidents

Each year the lives of many thousands of men and women in our country are needlessly sacrificed in home

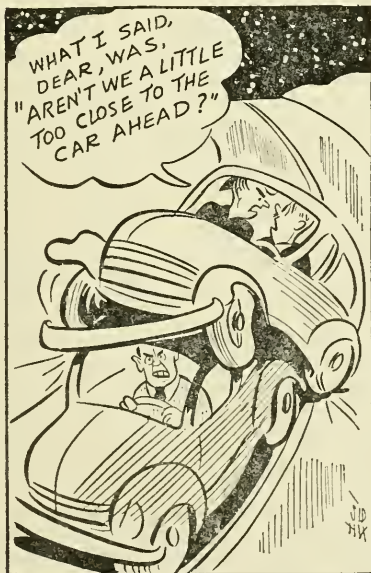


accidents because ordinary, common-sense safety precautions are not observed. This tragic fact stands out in bold relief from an analysis of last year's death records.

It is a curious fact that a considerable majority of those who suffered fatal injuries in and about the home were not engaged, at the time the injury was sustained, in tasks necessary for the maintenance and operation of the household. This was the case in about two thirds of the fatalities among women and in four fifths of the fatalities among men. In many of these instances the person was merely walking from one room to another, or up or down stairs, relaxing on a chair or couch, or sleeping.

A surprisingly large proportion of the total number of fatal injuries in this experience occurred between 10 p.m. and 6 a.m., when activity is at a minimum in most homes. Injuries suffered during these hours accounted for about

## QUIT YOUR SKIDDING



Follow other vehicles at a safe distance. It takes from 3 to 11 times as long to stop when pavements are snowy or icy.

## QUIT YOUR SKIDDING



Avoid making a quick stop in front of another vehicle. A rear-end collision may result.

two fifths of all the deaths from home accidents among men and for one fourth of the deaths among women. Conflagration and asphyxiation by gas contributed materially to this nighttime toll. Analysis of the death records reveals that conflagrations were often caused by defective or improperly used oil or coal stoves. Gas poisoning arose from a variety of circumstances: the inadvertent turning on of gas jets, leaking gas fixtures and appliances, and the use of gas heaters in poorly ventilated rooms.

But much more important numerically than either conflagration or gas poisoning as a cause of fatal home accidents at night, are falls. In fact, falls accounted for around 40 percent of the fatal injuries suffered at night among both men and women. The large number of persons reported as falling on the floor or stairs while on the way to the bathroom at night indicates the need for night lights or lights easily reached from the bed, especially in homes where there are aged or sick

persons. A considerable number of deaths also were caused by falls on entrance steps or hallway stairs by members of the household returning home late at night. In this experience as a whole, including both night and day, falls are by far the outstanding cause of accidental death in and about the home. Contributing to this large toll are fatal falls on steps, many of which are too steep or too narrow, have insufficient headroom, or are without handrails or adequate illumination.

That the smoking of cigarettes or pipes can be dangerous is evidenced by the considerable toll of life taken each year by accidents from this cause. One third of all the deaths from burns and conflagrations in the home among men were the result of careless smoking; even among women the proportion was as high as one sixth. In many instances the victim dozed off in bed or in an upholstered chair with a lighted cigarette in the hand or mouth.

Another fairly common but dangerous practice is dozing off while liquids are being heated on gas stoves. Last year, 11 people in this insurance experience—10 men and one woman—died from gas poisoning because, while they were taking a nap, the liquid on the gas stove boiled over and extinguished the flame.

Striking examples of preventable deaths are those due to firearms. Playing with, lifting, cleaning or scuffling for guns are the causes of accidents of this kind. Even eating has its hazards. In this experience, eight persons died last year from accidentally swallowing bones or fruit pits, with resulting choking or damage to the alimentary canal.

Altogether, the American people each year pay a high price in lives for home accidents which are preventable. It is encouraging to note that our leading national health and safety organizations are planning a combined attack on this problem.

## Notes and Comment

**PLASMA** THE American Red Cross has delivered two truck loads of plasma to the State Laboratory of Hygiene for redistribution to hospitals and physicians who are licensed to practice medicine in North Carolina.

To the sentimentalist this plasma is a dramatic reminder that the war ended much sooner than was anticipated. This plasma was originally intended to aid in saving the lives of men in our armed forces who would be injured in combat. In a way each package represents a man who would have been injured had the war continued. Each package also represents a patriotic American who donated blood to American Red Cross blood banks. The purpose of the donor was to aid in saving human life. Each package sent into North Carolina by the Red Cross may save the life of some person in North Carolina. It would be idle to think that the 6476 packages represent the saving of 6476 lives. Some patients receiving the plasma will need more than one package; others who receive it will die in spite of it. Nevertheless, one does not need a vivid imagination to realize

that these huge piles of plasma are bulwarks against death.

Those of us who have contributed to the Red Cross in the past have done so with the idea that this organization enabled us to minister into the victims of disaster, violence, pestilence, and famine. Individuals can do little to relieve distressed people in far away places by joining and investing in an organization such as the Red Cross, we can do much. Now this benevolent organization is in a measure declaring a dividend by returning to the people of North Carolina a sizeable portion of their contributions. Into every corner of the State will go plasma and its life-saving potentialities. In order that our people may have a greater understanding of the terms under which this plasma is available we give the following statement from the American Red Cross:

The American people gave through the American Red Cross large quantities of blood from which dried plasma was prepared for the armed forces. The supply of this material was predicted upon the needs of the Army and the Navy for a long and costly war. Because of an earlier cessation of hostil-



ities than was reasonably to be expected in both the European and Pacific Theaters, there is now on hand a quantity of dried plasma which is in excess of the needs of the Army and the Navy during the anticipated useful life of the plasma, namely, five years from the date of processing. According to army and navy estimates the available surplus amounts to approximately one and a quarter million packages at the present time.

The transfer to the American Red Cross of dried plasma declared surplus by the Army and the Navy is provided for by Public Law 457 of the 78th Congress, approved October 3, 1944. The pertinent portion of this law, Section II (f), reads as follows:

"No surplus property which was processed, produced, or donated by the American Red Cross for any government agency shall be disposed of except after notice of and consultation with the American Red Cross. All or any portion of such property may be donated to the American Red Cross, upon its request, solely for charitable purposes."

Under the foregoing provision of Congress a formal request was made to the Army and the Navy that all surplus plasma be transferred to the American Red Cross. This section was taken on the ground that the American Red Cross has a responsibility to the American people to assure that plasma and other derivatives of the blood voluntarily contributed for the members of the armed forces be utilized to the best advantage and not be wasted or offered for sale or barter. In making this request it was proposed that any surplus should be returned to the American people, who had made these supplies of plasma possible, for use in veterans' hospitals and in civilian medical practice. This proposal was accepted by the Army and the Navy and, accordingly, they will transfer to the American Red Cross all available surplus stores of plasma and other blood derivatives.

Each area office will provide warehouse storage space sufficient to handle the plasma to be made available to state departments of health within its jurisdiction. The storage temperature must not be allowed to go below 35 degrees F. or above 120 degrees F.

From these warehouses plasma will be furnished to any state department

of health which, after consultation with the area medical director and representatives of the state medical society and state hospital association, has prepared a plan satisfactory to the American Red Cross for the distribution of plasma within its state for use in civilian medical practice.

The American Red Cross will estimate, on the basis of the population of the state, weighted by the number of physicians licensed to practice medicine and surgery and by the number of general, pediatric, and maternity hospital beds and any other beds devoted to the care of acute illness, the amount of plasma required by each state for a three months' supply. This will constitute the initial shipment to a state department of health, which will designate the depot or depots to which it desires shipment to be made.

Requisitions for replacement supplies of plasma must be made in writing by the state department of health and sent to the area medical director for approval and transmittal to the area manager. The total amount held in storage by a state department of health at any time must not exceed an estimated six months' supply.

No charge will be made by the American Red Cross to the state department of health either for the product or for the cost of shipment.

The plan of distribution within a state must include the following general principles and procedures:

a. The state department of health is to:

1. Assume the responsibility for making an inventory of the plasma received so that it may be issued in time to insure its use before it becomes outdated. This is necessary because the surplus plasma is made up of lots bearing different expiration dates.

2. Agree to affix to each individual package prior to distribution a special label, to be provided by the American Red Cross, bearing substantially the following statement: "This plasma, having been declared surplus to the needs of the armed forces, is made available by the American Red Cross without charge for civilian use." Space will be provided on the label for the department of health to add its name as the distributing agency.

3. Make the plasma available to all physicians licensed to practice medicine

and surgery and to all acceptable hospitals for administering to any patient without charge to physician, hospital, or patient either for the product or for the cost of shipment.

4. Encourage by all available means proper use of the plasma and maintain a record of its distribution.

5. Issue and disseminate information relative to the use of blood and blood derivatives to the medical profession and the public.

6. Conduct, in consultation with the area office, the distribution of plasma and direct the attendant publicity in such a way as to provide for participation of the Red Cross chapter in the local program in accordance with the provisions set forth in Section VI below.

7. Submit periodic reports to the area medical director on the status of the program. These reports should include a monthly record of the amount of plasma distributed, the amount of the reserve supply, and copies of publicity, directives, and other material pertinent to the program.

b. The national organization of the American Red Cross is to:

1. Issue publicity through its own channels concerning the distribution and use of the plasma and also make available releases for distribution through the regular state department of health channels.

2. Prepare for the use of state medical societies and the state departments of health technical information concerning the use of blood and blood derivatives for the purpose of assisting them in obtaining proper use of the plasma.

3. Prepare information on the development and operation of blood and blood derivatives programs throughout the country for the purpose of assisting the various state departments of health in these programs.

It is desired and expected that the distribution and use of the surplus plasma in the manner described will, in addition to serving its primary purpose:

a. Assist in making possible an accurate determination of the needs for blood and blood derivatives throughout the country.

b. Strengthen and stimulate the development of already established state and local civilian blood and blood derivatives programs.

c. Demonstrate the value of such programs and thus stimulate active interest in them on the part of the public, the medical profession, departments of health, and Red Cross chapters in those parts of the country where these programs do not now exist.

Arrangements have been made to provide plasma for former servicemen and women in veterans' hospitals. There will be shipped to the Veterans Administration the quantity of plasma which it has estimated as being sufficient to meet its needs during the five-year life of the dried plasma.

This plan for the distribution of the surplus plasma has been concurred in by the Association of State and Territorial Health Officers, the American Medical Association, and the American Hospital Association.

\* \* \*

#### To the Physicians and Hospitals of North Carolina

The American Red Cross has sent us a supply of plasma to be distributed equitably among the physicians and the hospitals of the State.

This plasma was allotted on the basis of one unit to each physician licensed to practice medicine in North Carolina and to hospitals—one unit for each four general, maternity and pediatric hospital beds.

This plasma is distributed with the understanding that it be made available to all, without charge, regardless of financial status.

Each package of plasma is complete with solvent for the dry plasma, double flow needle, tubing, and intravenous needle. An attached sling is also provided, thus everything needed for administration is provided except materials for cleansing the arm of the patient.

Plasma should be stored in a dry place where the temperature range is between 35 degrees F. and 120 degrees F. The expiration date is based on the estimated life of the rubber used in making the outfit. Presumably this supply of plasma will be supplemented within approximately ninety days with another allotment.



Institutions and physicians will be expected to fill out a short form reporting use before securing an additional supply. Physicians can secure their package merely by writing or telegraphing a request to the State Laboratory of Hygiene, Raleigh, N. C. Hospitals in requesting their supply should furnish us with the following information:

1. Number of general, maternity and pediatric beds in the institution.
2. Number units of plasma used during the previous three months' period.
3. Number units requested for immediate shipment.

The request should be on stationery of the institution and should bear the signature of a responsible officer of the institution.

Yours truly,

John H. Hamilton, M.D., Director  
State Laboratory of Hygiene

\* \* \*

**DR. GUDAKUNST** During the recent epidemic of poliomyelitis the figure of Dr. D. W. Gudakunst was familiar in many of the stricken sections of our State. He worked hard to perfect the organization which was set up to aid the victims of this disease. We are, therefore, distressed to receive the following death notice:

Dr. Donald Welsh Gudakunst, Medical Director of The National Foundation for Infantile Paralysis, who died of a heart attack in his room at the Blackstone Hotel, Chicago, at 12:35 p.m. yesterday, (Sunday, January 20), had a long record in medicine and public health and was one of the country's leading authorities on poliomyelitis.

He joined the National Foundation January 1, 1940, and was in charge of the organization's rapidly expanding program of research in infantile paralysis and care and treatment of patients.

Prior to joining the National Foundation, Dr. Gudakunst spent several years in public health work, chiefly in Michigan. He was Deputy Health Commissioner of Detroit from 1924 to 1937 and Michigan State Health Commissioner, 1938 and 1939. From 1937 to 1942, he was non-resident Professor of Preventive Medicine and Public Health, University of Michigan.

Dr. Gudakunst was born at Paulding, Ohio, August 18, 1894, the son of Wil-

liam Edward and Fannie May Welsh Gudakunst. He attended Latin High School, Somerville, Mass., and the University of Michigan, graduating as Bachelor of Science in 1917 and as Doctor of Medicine in 1919. His internship was spent at the University of Michigan Hospital.

He is survived by his wife, Bernice Drahner Gudakunst, and a daughter, Mrs. Howard A. Vernon of Chicago. He lived on North Street, Westport, Conn.

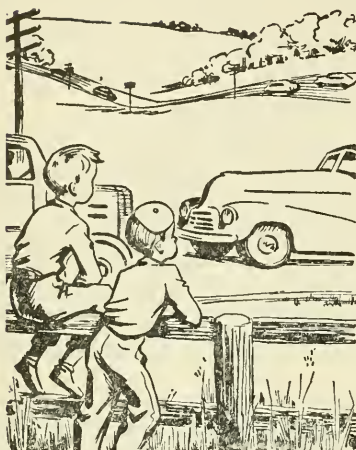
Dr. Gudakunst was a fellow of the American Public Health Association, the New York Academy of Medicine and the American Medical Association and a member of Alpha Kappa Kappa and Delta Omega fraternities. He was a frequent contributor to medical journals.

At the time of his death, Dr. Gudakunst was talking in his hotel room with Commander Robert S. Schwab, formerly director of a research project at the Massachusetts General Hospital financed by the National Foundation.



Paul Beavers, age 7 months, son of Mr. and Mrs. George M. Beavers, Jr., Apex, North Carolina. Paul is a good example of medical heritage and supervision.

# PROTECT CHILD LIFE!



Caution your child about the changing traffic situation. There are more cars, traveling faster than during wartime. Many children were too young to remember traffic as it was before the war, or they have forgotten how to protect themselves. Knowledge now may avert tragedy later.



Walk facing traffic is a cardinal rule for highway hiking. Teach children to walk facing traffic, preferably on the shoulder of the road allowing enough room for oncoming cars to pass at a safe distance. For night walking, wear something white or carry a flashlight.



Teach children to cross at intersections in city traffic. Be sure your child understands to walk with the green light. Caution children against crossing in middle of block or darting out from between parked cars. Be sure they know to look for turning traffic before crossing!



"Playing in the street" is a leading cause of child traffic fatalities. Teach children to play in well-protected play areas. Even "blind" streets are dangerous because children may not be alert to cars which come into these streets. Children should learn very young to stay out of streets.



# The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

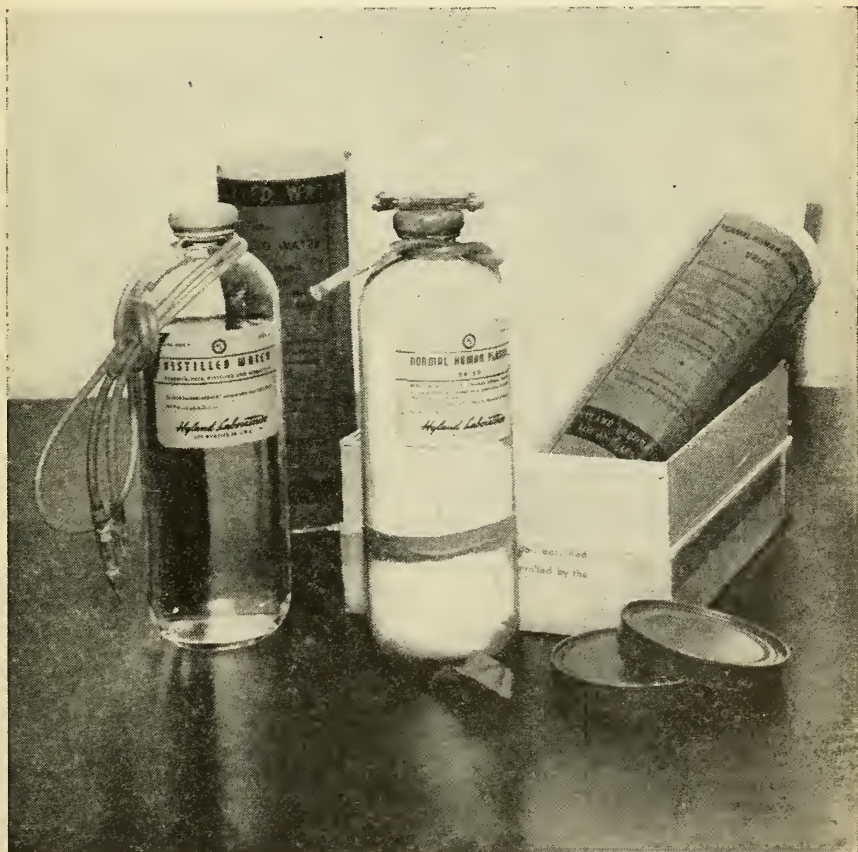
**This Bulletin will be sent free to any citizen of the State upon request!**

Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912  
Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 61

MARCH, 1946

No. 3



One of Six Thousand Four Hundred Seventy-Six Packages of Plasma  
Allocated to North Carolina by the American Red Cross.



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## FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

## SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters.)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet List: 9 to 12 months; 12 to 15 months;
Breast Feeding.	15 to 24 months; 2 to 3 years; 3 to 6 years.
Infant Care. The Prevention of Infantile Diarrhea.	Instruction for North Carolina Midwives.
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## Life and Death in North Carolina in 1945

By W. H. RICHARDSON

North Carolina State Board of Health  
Raleigh, North Carolina

**N**ORTH Carolina's general death rate of 7.6 per one thousand inhabitants in 1945 was the lowest in the State's history.

This is disclosed in the provisional report for the year issued by the State Board of Health's Division of Vital Statistics, which gives a concise picture of life and death in North Carolina during the closing year of World War II.

North Carolina's general death rate maintained a sustained downward trend in mortality throughout the duration of the conflict recently ended. The last year of American participation in World War I was marked by a rate of 17.6 persons per one thousand population, this having been due to the influenza scourge which swept through the world in 1918, playing no favorites. No such epidemic occurred during World War II, throughout which we made substantial gains not only in the matter of lowering our general death rate, but also in our fight against certain specific diseases.

It is interesting to compare the general death rates in our State for the four years in which we were engaged in World War II. The rates for 1942 and 1943 were identical, being 8.1 per thousand. The 1944 rate was 7.9 and the rate last year 7.6. These are all below the national rate, which was 10.9 in 1943. Later figures are not available at this time, but it is hardly to be supposed that the national rate has shown any such decline as that which has been noted in North Carolina.

In numerical terms, there were 28,950 deaths in North Carolina in 1945, as compared with 29,560 in 1944.

The birth rate, on the other hand, rose and fell during the war years, as might have been expected. The number of births recorded and rates were as follows: 1942, 90,056—24.6; 1943, 95,251—25.7; 1944, 92,412—24.7; 1945, 88,597—23.4. These figures are easily understandable, when taking into consideration the shift in the male population during the fighting years. Early war-time marriages resulted in an all-time high in the number of births, in 1943. Then, men were moved overseas in ever-increasing numbers. It would not be unreasonable to assume that, with so many husbands back in America, there will be another upsurge in births in due time; but, in the handling of vital statistics, the State Board of Health's duty is to record and not to prophesy.

One of the most gratifying things about the 1945 provisional report of the Division of Vital Statistics is the decline reported in the number of infant deaths, that is, deaths among babies under a year old. The total for 1945 was 3,842, as compared with 4,130 the preceding year, and the rate declined from 44.7 per one thousand live births reported to 43.3. Both figures are entirely too high and are above the national rate, but the reduction does denote progress, as do the figures on maternal deaths, of which there were 228 in 1945, with a rate of 2.5 per one

thousand live births, compared with 274 in 1944, when the rate was 2.9. Numerically, these figures might seem insignificant, but in terms of percentage the difference is appreciable.

That section of the 1945 report giving the number of deaths from preventable accidents does not constitute such a rosy picture. There were 1,299 such deaths in 1945, as compared with 1,440 the preceding year—a reduction, it is true; but the 1945 figures reveal a distinct uptrend in deaths resulting from primary automobile accidents now that the war is over. According to figures reported by the State Board of Health, including fatalities occurring on military reservations and deaths not classed as resulting from traffic accidents, there were 695 such deaths in North Carolina last year, as compared with 634 in 1944. Such deaths are on the increase, according to reports from all sources.

During 1945, there were only 64 deaths from air transportation accidents in North Carolina, as compared with 258 the preceding year. This is easily understood when we take into consideration that North Carolina had a liberal quota of trainees for aerial warfare.

Deaths from other accidents classed as preventable, last year, included 20 from automobile and railroad collisions, 68 from other railroad accidents, 145 from drowning, 209 from conflagration and accidental burns, and 98 from accidental traumatism by firearms.

During the year, 241 persons in North Carolina committed suicide and 285 were homicide victims, making a total of 526 who killed themselves and were slain by their fellowmen.

In addition to the 1,299 deaths from accidents termed preventable, there were 1,123 deaths in North Carolina during 1944 from diseases known to be preventable or curable. In the latter class were 288 deaths attributed to late syphilis, which might have been cured, if early treatment had been administered, also 12 from typhoid fever, 16 from tetanus (lockjaw), 72 from pellagra (prevented and cured by eating the right kinds of food), 21 from malaria, 95 from diphtheria, 92 from whooping cough, and one from rabies.

According to the provisional report for 1945, the death rate from all forms of tuberculosis in North Carolina during 1945 was 37.4 per 100,000 inhabitants, which was nearly one point

higher than the 1944 rate. The number of tuberculosis deaths for each of the past two years was 1,417 and 1,368, respectively.

After all, while we have made good progress, we have not as yet whipped all the infectious diseases over which we hold the whip hand—and we will not do so until we let go with all that science has to offer.

The death toll from cancer in North Carolina in 1945 was 2,421, and the number of persons out of every 100,000 inhabitants dying of some form of this disease was 64. Deaths in 1944 totaled 2,298, with a rate of 61.4 per 100,000 inhabitants. There is food for thought in these figures and a mighty incentive for those who are seeking, with all the means at their command, to wage an all-out war on this ancient and, so far, unconquered enemy of the race.

The 1945 death charged against the pneumonias stood at 1,540, as compared with 1,555 the preceding year, denoting practically no change. But these totals were both below those registered before the discovery of, first, anti-pneumonia sera, and, later, sulfa drugs and penicillin.

Thus, we have a general picture of life and death in North Carolina in 1945, with the realization that there is still much to be done. The millenium has by no means arrived.



# Venereal Disease Control in North Carolina

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THE primary objective of the venereal disease control program in North Carolina is to reduce the attack rate of syphilis and gonorrhea. To this end, the treatment of infectious cases of these diseases is an essential method of attack.

In the years before penicillin, effective treatment of both syphilis and gonorrhea was difficult to accomplish. Syphilis was treated with weekly injections of alternating courses of arsenicals and bismuth. A large percentage of patients who began treatment of this type lapsed before minimal adequate treatment had been received. Much time and effort was spent in follow up of delinquent patients and generally with disappointing results. For example, of a group of 1,884 patients admitted to clinics in North Carolina between January 1 and July 1, 1943, 87% had received less than 40 injections by July 1, 1944, and only 6% had been discharged from the clinics as "cured."

Gonorrhea, also was difficult to manage, especially in the female. Treatment with sulfathiazole was easily administered, but had the disadvantage of being orally administered. In irresponsible patients, one could not be sure whether the pills had actually been swallowed as directed or at all. Furthermore, it was extremely difficult to tell when a cure had been effected (especially in women), since facilities for culturing the gonococcus were not generally available.

Some of the obstacles that have confronted the program have been removed by the advent of penicillin and intensive methods of treatment.

Rapid Treatment Centers designed to administer intensive treatment for venereal diseases were established in Charlotte and in Durham in the fall of 1943. During the early months of

their operation, syphilis was treated with various treatment schedules employing arsenoxide (mapharsen) and bismuth. This treatment was effective, but proved too toxic to justify its continuance. Fortunately, penicillin became available during the summer of 1944. Schedules of treatment for syphilis have been developed using penicillin plus relatively small amounts of arsenoxide and bismuth which are safe and are proving effective. Penicillin alone has been tried, but too many relapses occurred, hence the addition of other drugs to supplement its effect.

For gonorrhea, however, penicillin has been amazingly effective. The first treatment scheme that was used was the injection of 30,000 units of penicillin every three hours for five doses for a total dose of 150,000 units. Later this was modified when it was found that equally good results were achieved by giving the same total dose in three injections at two hour intervals.

In the summer of 1945, penicillin in beeswax and peanut oil became available. This preparation, by delaying absorption, makes it possible to give the entire dose of penicillin for gonorrhea in one injection. With this method of treatment, gonorrhea has been returned to the local clinics by the rapid treatment centers.

These revolutionary developments in treatment methods have solved some of our problems. However, new problems have arisen and much remains to be accomplished before venereal diseases are controlled.

In the case of both syphilis and gonorrhea, the problem of reinfection has arisen. To illustrate, John Doe learns that he has syphilis and goes to a rapid treatment center. His wife, Mary, was exposed to John before John was treated. Other exposures occur when John gets home just before Mary's



syphilis shows up. She goes to a rapid treatment center and returns home just before John's second infection shows up, and she is again exposed. Conceivably, this could go on indefinitely. Every attempt is being made to reduce possibilities for reinfection through intensive patient education and through contact investigation.

Another problem has arisen with syphilis. No treatment scheme for syphilis gives 100% cures. Intensive therapy has proved about 85% effective, which is as good as any method to date. However, the relapses that do occur following intensive therapy are mostly of an infectious type. Furthermore, the first lesions that recur usually appear trivial and may go unnoticed by the patient. The public health significance of this is readily appreciated. Fortunately, it is possible to predict such a recurrence by observing a quantitated blood test monthly for a year following intensive treatment. After the first year, the period of greatest danger is

past. Observations are then made every three months for the second year and once yearly thereafter to assure the patient that all goes well.

Our biggest problem, however, remains the uncovering of newly acquired infections. In general, the earlier a case is treated, the fewer people will be exposed to it and the better the chance of cure for the individual. Education of the public regarding the facts about venereal diseases and what is available for their treatment should go a long way toward control. Contact investigation must be continued, intensified, and speeded up as an adjunct. Finally, it should be pointed out that without the cooperation and assistance of the practitioners of medicine, the venereal disease control movement could never have succeeded to its present extent. An even closer cooperation and more active participation, particularly in the process of investigating contacts, is needed for ultimate success.

## Local Health Units

SOME five years ago the American Public Health Association created a Committee to study the problems of local health administration. This Committee was headed by Dr. Haven Emerson. A little more than six months ago the Committee's report was published by the Commonwealth Fund, 41 East 57th Street, New York 22, New York. The price is \$1.25. The first edition of one thousand copies was exhausted within a month. More than one-half of the second printing of two thousand has already been distributed. Reader interest has been widespread. Copies have been bought in every state and a number of foreign countries.

The first section is devoted to principles upon which the report is based. The second is given over to definitions and sources of data. The third section discusses local health services existing and proposed in the United States. The fourth section includes the present and suggested personnel and costs for local health services for each state and the District of Columbia.

In the Foreword Dr. Emerson states: "This report, by a committee of state and local public administrators, is ad-

dressed to the home-town folk of continental United States, and more particularly to their elected officers of local government of village, town, city, or country. Its purpose is to suggest a way to cover a free society with full time health services at the community level.

"It may come as a shock to many that only two-thirds of the people of our country are today under the umbrella of full time local health protection, while approximately forty million are excluded by horse-and-buggy political boundary lines, or by the economic stringencies of the areas in which they happen to live. Yet such is our present situation. Further, the provision of health services, whether full or part time, is now essayed by 18,000 or more counties, cities, towns, villages, or districts. These local health jurisdictions are inherited from the past. They came into being, like many good and bad things in a young and growing country, without benefit of policy. We know now that we can afford nothing less than coverage of every population and area unit of our nation with competent local health service. How can we achieve it? Do we continue in an outworn tradition.



or shall we boldly redesign our apparatus? The authors of this report propose the latter course.

"They begin by presenting a picture of contemporary local health services as they are—the broad features of their adequacies and inadequacies, the number and kinds of persons who do the work, and the cost of this indispensable function of local government. The organization of local health services of each state is considered in detail and the existing personnel and the costs are analyzed. Detailed data are shown in tabular form, making comparative study simple. Comparisons are revealing: for example, it is by no means always true that the richest states spend the largest amount per capita for local health service or have the largest proportion of their population served by full time local health officers. Other cherished beliefs are upset by examination of state summaries in relation to national figures distributed over the total population. This section of the report stands wholly on factual ground. This is how we are.

"The Committee then moves into the realm of attainable possibilities. It suggests a new design in the administrative apparatus for delivering local health services. Employing the same set of guides for each state—

complete coverage with basic minimum full time service; units of jurisdiction of populations large enough (50,000 or more) to support and justify staffs of full time, professionally trained persons; a cost of approximately \$1.00 per capita—it shows that all the objectives can be realized and that only about 1200 units of local jurisdiction would be required to do the job. The authors repeat that this is a way to cover the entire population with full time basic minimum local health service. The particular proposal for any given state or city-county or multi-county unit, however, must be considered by the people and their local government, and by the respective state health officer or board of health, as expressing a principle of administration not a finality for action. Another arrangement of counties and populations may be preferable. The principle of local cooperation, however, and the pooling of community resources for health in the interest of economy and efficiency are important, and re-

semble those that have brought about consolidated or union school districts and road districts serving large areas with engineering adequacy.

"While in most of the states existing permissive or mandatory legislation authorizes the development advised by the Committee, in thirteen of them there are no such laws; but it is equally true that such cooperative planning and operation of local health services are nowhere forbidden.

"It is expected that among those who can be relied upon to encourage and actively support the plan here offered will be found the state medical, dental, and nursing organizations, the official and voluntary health agencies, and such bodies of influence and public opinion as state universities together with farmer and labor groups concerned with better quality of living in the smallest as in the largest communities.

"This report has been made possible by a grant of the Commonwealth Fund which has also undertaken its publication. The staff of the Fund has contributed generously to its final editing.

The Committee on Local Health Units of the American Public Health Association assumes full responsibility for the report, including all statements of fact and opinion."

There is much in the report which is good thought provoking material. Some of the recommendations will stimulate controversies. Since the problem discussed is important, we will devote considerable space in this issue of the Bulletin to quotations from the report.

"Whether local units of health jurisdiction are created by local initiative or authority and by cooperative or legally specified procedures, or are developed under mandatory for permissive legislation by the leadership and personnel of the state department of health is not a matter of primary importance or of sharp distinction. What is essential is that no population unit or area of the United States remain any longer without a full time medically directed health service responsive to the needs and wishes of the people of the area.

"Conviction as to the permanent and necessary part certain to be played by local public health services in the United States whether in the normal conditions of peace or during emergencies

of war, or of economic or other catastrophes, was reinforced in 1942 by two declarations of similar intent issued within a few months of each other by the House of Delegates of the American Medical Association in June and by the Governing Council of the American Public Health Association in October. To these there was added on March 22, 1944, a resolution of the same tenor adopted by the State and Provincial Health Authorities of North America.

"There is a singleness of purpose in these resolutions which augurs well for the common understanding of physicians and their colleagues in associated professions as to the role to be played by local civil government in making effective for the benefit of the public the resources which the sciences of preventive medicine have put in our hands and are steadily expanding for practical application.

"Since it appeared from a preliminary review of the situation that approximately 40,000,000 of the people of the continental United States were living in communities where local health services had either not been undertaken at all, or, if provided for, were under the direction of part time and generally untrained or inexperienced health officers, it seemed imperative to analyze the facts with a view to holding to the good that had already been developed and to propose such provision for the future as would include within units of local health jurisdiction all of the people and the entire land and water area of our states.

"It must be obvious that a community whether of rural or urban character may be so small in numbers, and with such slender resources, that it cannot afford the employment of even a skeleton staff of persons trained and experienced in public health. Similarly it is well known that in certain large areas of our country and in fact in several of the younger states the small population contained within very large areas has rendered anything like close community interests and services on a local or even country-wide basis impractical.

"Since the quality of local health service, the community leadership, the planning of a balanced program, and the direction of policies and performance of the entire local health department staff depend upon the qual-

ifications of the medical officer of health, it has appeared to the Committee that in order to command service of a high professional grade the salary of this person should be not less than the net professional income of the good surgeons and medical clinicians or internists of the community. Small communities and scattered populations need the same professional health services as do large and concentrated aggregations, but the former as separate and unrelated groups cannot generally afford the kind of local health officer whom the larger units of population of local government can employ.

"The six basic functions of a local health department include:

1. Vital statistics, or the recording, tabulation, interpretation, and publication of the essential facts of births, deaths, and reportable diseases;
2. Control of communicable diseases, including tuberculosis, the venereal diseases, malaria, and hookworm disease;
3. Environment sanitation, including supervision of milk and milk products, food processing and public eating places, and maintenance of sanitary conditions of employment;
4. Public health laboratory services;
5. Hygiene of maternity, infancy, and childhood, including supervision of the health of the school child;
6. Health education of the general public so far as not covered by the functions of departments of education.

"For populations of larger size (viz. 100,000 to 150,000 or more) it may be practical and economical to include within the staff of the local health department not only additional administrative health officers (chiefs of communicable disease control, maternity and child hygiene, tuberculosis or venereal disease or industrial hygiene), sanitary officers, nurses, and clerical staff proportionate to the size of the population, but to incorporate some or all of the specialized personnel provided for the smaller community only through the part time assistance of the staff of the state department of health. It would be expected that the staff of a single local health department for a population unit of 150,000 should include two or three full time administrative medical officers, that is, the commissioner of health or health offi-

cer, a chief of division or bureau of communicable diseases including tuberculosis and venereal diseases and a chief of division of maternity and child hygiene including the health of school children; a chief of division of environmental sanitation, who would be of professional grade, and five assistant sanitary officers; thirty public health nurses, of whom four would be of supervisory grade; and ten persons of secretarial and clerical grades, but also one statistical clerk or statistician, one full time veterinarian, three persons for public health laboratory work (one of professional grade, one technician, and one unskilled assistant), one full time dentist and two full time dental hygienists, and one health educator. Some large communities will wish to add one or more investigators for venereal disease control. Nutritionists and other types of specialist serving as part of the field staff can, in larger units of population, be included in the quota of public health nursing personnel. There is usually some unskilled and non-technical help employed for operating and maintaining the health department office, including messenger and supply services.

"The state health officer of North Carolina, although agreeing with the general principle of larger units of local health administration, is not willing to accept as few units as the 48 suggested by the Committee, nor has he proposed a definite plan for the 70 or 75 units he believes will be required in his state. For Vermont there is agreement between the state health officer and the Committee on a districting plan, but the Committee does not concur in the recommendation of the health officer that in the 246 cities and towns of the state local part time health officers continue to serve within the framework of the larger districting system."

From the Fourth Section—that dealing with the problems of the states—we quote the following from the North Carolina Section:

"North Carolina, with a 1940 population of 3,571,600 and an area of 48,740 square miles, has a population of density of more than 70 persons per square mile, as contrasted with that of about 45 for the country. Politically it is divided into 100 counties ranging in population from 5,400 to 153,900 and

averaging nearly 36,000 each. Twenty-three counties have populations of more than 50,000, 10 have less than 10,000, and 47 have less than 25,000. There are 5 cities of more than 50,000 persons.

"Nearly a million Negroes are citizens of the state and comprise over a fourth of the total population. Only 5 states (Mississippi, South Carolina, Louisiana, Alabama, and Georgia) have a higher proportion of Negroes.

"Nearly three-quarters of the state's population is rural and one-third of its employed are farmers, farm managers, foremen, or laborers. Another 27 per cent are engaged in manufacturing. More than one-third of the nearly 300,000 farms are less than 30 acres and more than half are less than 50 acres in size.

"Fifteen western counties, comprising a population of 348,400, are within the limits of the Tennessee Valley Authority and much of the western part of the state has been influenced by the activities of this project.

"The state's birth rate in 1940 was 22.6, as compared with 17.9 for the country as a whole. This rate was exceeded in only 5 states. The excess ratio of births over deaths was exceeded only in New Mexico and Utah. The death rate of 9 was below that of the country as a whole and was lower than that of any but 8 other states. The infant mortality rate, however, was considerably higher than the rate for the United States and was exceeded by that of only 10 states. The tuberculosis death rate was likewise somewhat higher than that of the United States.

"Expressed in terms of spendable income, the estimated per capita wealth in 1941 averaged \$389.00 and varied in separate counties from about \$150 to about \$750. For only 9 other states were lower per capita spendable incomes reported.

"The number of general hospital beds found in 1940 was 8,024, or 2.2 per 1000 population. In 1941, 2,485 practicing physicians were reported, about one per 1,437 population. The distribution of physicians throughout the state is very uneven; one county has one physician for 436 persons but other counties have only one physician for 2,500 persons, and in two instances the ratio is one to more than 3,000 persons.

"The public health law of North Carolina provides for county, city, and



town responsibility for local public health and permits groups of counties, or counties and their contained cities, or parts of counties without regard to township lines, to act as a district health unit.

"Reports were received showing budgets totaling \$2,049,600 for local health service in 1942, an average per capita of 57 cents. Not all of this amount was from local funds, however, a considerable portion having come from state or federal subsidies, as in other states.

"Full time health officers were reported in 64 units comprising 83 counties; there were 32 single-county units, 11 city-county units, 8 bi-county units, 5 units of 3 counties each, one of 4 and one of 5 counties, and 6 were city units. No service was reported in 17 counties comprising 8 per cent of the population, although in these as well as in the remaining counties there was undoubtedly some part time service under local boards of health or of education for which no figures were available.

"For the expenditure reported above, 64 full time health officers were provided and an additional 23 full time physicians. Clinician service was provided through the employment of 175 part time doctors.

"One public health nurse was reported for each 10,600 of the population, or about half as many as recommended by the Committee. However, in addition to nursing personnel, nearly 100 venereal disease follow-up workers were reported; these, if added to the nurse quota, would result in a ratio of one nurse to 8,400 population.

"Engineers, veterinarians, and sanitarians together totaled 119, or about one per 30,000 population. Only 6 of these, however, were reported as professionally trained—4 engineers and 2 veterinarians. Clerical service was reported in the ratio of one to about 17,000 population, but nearly a fifth of the 208 clerks were reported as being on a part time basis.

"Laboratory and health education workers were practically non-existent. Only 22 laboratory workers of all kinds were reported and no health educators as such.

"Dental health service has been developed to a considerable extent, 21 full time and 38 part time dentists having been reported. No dental hygienists, however, were employed.

"The Committee recommends that the 100 counties of North Carolina can be provided with basic minimum local health services by 48 units of local health jurisdiction. With respect to this suggested districting the state health officer expressed his convictions as follows:

'As a war emergency program, the suggestion probably has some merit if we knew the war would last for any great length of time. For a permanent basis, I cannot agree that North Carolina can be served by 48 units. We would have to have more. It is realized that in this state we have too many counties, but the local officials would not agree to this statement. We in public health see the necessity for certain consolidations. I am of the opinion we would need between 70 and 75 health units in the one hundred counties, and that number probably represents the actual number of counties needed in North Carolina.'

"Of the 48 units suggested by the Committee, 8 have populations of more than 100,000, the most populous being a single county of 153,900. On the other hand, 4 units have populations of less than 50,000. Twelve of the 48 units are single-county units, 26 are bi-county units, 6 are tri-county units, and 2 each are made up of 4 and 5 counties.

"To provide good local health service for the suggested units, 48 medical health officers and 12 additional full time physicians will be required, a reduction from 87 full time physicians reported in 1942. Part time clinician service remains practically unchanged from the reported in 1942, a total of 161 being recommended.

"Public health nurses are more than double the number reported in 1942 and are recommended in the ratio of approximately one to 5,000 population, a total of 171. However, it is understood that this number may be made up in part of nutritionists and venereal disease follow-up nurses.

"One public health engineer is provided for each unit and from one to 5 sanitarians in each of the other units except the least populous of 25,000. A total of 137 engineers and sanitarians is suggested, as compared with the 117 reported in 1942. In addition, a veterinarian is suggested for each of the 5 large units.

"A total of 241 clerks is recommend-





Silver Anniversary, National Society for Crippled Children and Adults, Chicago

ed, among them one statistical clerk in each of the 8 units above 100,000 in population.

Modest laboratory service is provided for each unit, including usually one technician and an unskilled assistant. In 8 units a professional worker is also recommended. The total workers recommended number 107. It is assumed that the laboratory division of the state department of health will furnish not only professional supervision in all but the largest units, but will also provide service for many of the more complicated diagnostic procedures. Also, the state would be well advised to consider the economies inherent in establishing branches of the state laboratory to serve local units.

"To provide the recommended services, it is estimated that approximately

\$3,183,200 will be required, or about 89 cents per capita of the state's population. In this estimate, 25 per cent of the total cost is allowed for expenses other than salaries. Since this is a fairly generous estimate for non-salary costs, it is possible that the per capita can be further reduced or additional service provided beyond the minimum suggested, particularly clinician service for which relatively small amounts are allowed in the estimate. Per capita cost has been held within one dollar for each unit, although reported 1942 expenditures exceeded this figure in 2 units. The estimate represents an increase of about 55 per cent over 1942 reported expenditures when no local health service was reported for 8 per cent of the population and when there were obvious inadequacies in the full time services particularly in public

health nursing. North Carolina, because it is not among the richest of states, will continue to need federal subsidies in larger volume than many other states, and must avail itself of all possible economies.

#### Counties in Each Unit of Local Health Jurisdiction

Unit 1	Unit 16
1. Cherokee	1. Rowan
2. Clay	Unit 17
3. Graham	1. Cabarrus
4. Macon	2. Stanly
5. Swain	Unit 18
Unit 2	1. Anson
1. Haywood	2. Union
2. Jackson	Unit 19
Unit 3	1. Davidson
1. Henderson	2. Davie
2. Transylvania	Unit 20
Unit 4	1. Rockingham
1. Buncombe	Unit 21
(Asheville)	1. Guilford
2. Madison	(Greensboro)
Unit 5	Unit 22
1. Avery	1. Montgomery
2. McDowell	2. Randolph
3. Mitchell	Unit 23
4. Yancey	1. Richmond
Unit 6	2. Scotland
1. Polk	Unit 24
2. Rutherford	1. Hoke
Unit 7	2. Lee
1. Burke	3. Moore
2. Caldwell	Unit 25
Unit 8	1. Alamance
1. Alleghany	2. Chatham
2. Ashe	Unit 26
3. Watauga	1. Caswell
Unit 9	2. Orange
1. Surry	3. Person
2. Wilkes	Unit 27
3. Yadkin	1. Durham
Unit 10	(Durham)
1. Catawba	Unit 28
2. Lincoln	1. Granville
Unit 11	2. Vance
1. Cleveland	Unit 29
Unit 12	1. Franklin
1. Gaston	2. Warren
Unit 13	Unit 30
1. Mecklenburg	1. Wake
(Charlotte)	Unit 31
Unit 14	1. Cumberland
1. Alexander	2. Harnett
2. Iredell	Unit 32
Unit 15	1. Robeson
1. Forsyth	Unit 33
(Winston-Salem)	1. Brunswick
2. Stokes	2. New Hanover

Unit 34	Unit 43
1. Bladen	1. Onslow
2. Columbus	2. Pender
Unit 35	Unit 44
1. Johnston	1. Jones
Unit 36	2. Lenoir
1. Edgecombe	Unit 45
2. Nash	1. Hyde
Unit 37	2. Tyrrell
1. Halifax	3. Washington
2. Northampton	Unit 46
Unit 38	1. Bertie
1. Beaufort	2. Chowan
2. Martin	3. Gates
Unit 39	4. Hertford
1. Pitt	Unit 47
Unit 40	1. Camden
1. Greene	2. Currituck
2. Wilson	3. Dare
Unit 41	4. Pasquotank
1. Wayne	5. Perquimans
Unit 42	Unit 48
1. Duplin	1. Carteret
2. Sampson	2. Craven
	3. Pamlico

Note: Cities of 50,000 population or over are given in parentheses.

#### Personnel Problems

Since the beginning of the war all organizations have been working under the handicap of personnel problems. Your State Board of Health has been endeavoring to do the best it could under the circumstances. The people of the State know whether or not we should apologize for the service which we have rendered. Those of us in Raleigh feel that we should make some explanation.

During the years, 1944-1945 there were 105 resignations by persons holding positions with the State Board of Health. Each resignation form gives a reason why the employee is discontinuing his service. Some state frankly that the resignation is for the purpose of accepting a better position. Others are somewhat vague; for instance, on twenty-four forms the statement is made that the person is leaving the State Board of Health in order to accept a better position; ten state that they are resigning to accept other positions. A personal acquaintance with these workers reveals that at least five of these ten actually resigned in order to accept a better position. Eleven physicians resigned from the staff of

the State Board of Health to enter private practice. Therefore, a recapitulation would show that forty-nine of the one hundred five who resigned did so on account of financial or economic reasons. Resignations for personal reasons totalled twenty-nine. This included—nine for home responsibilities; five for pregnancy; six to join their husbands; six to be married; four entered the service of the Nation to wear a uniform of the armed forces; four resigned on account of illness; four re-

signed to enter school; ten gave no reason; one resigned because she was unable to find a place to live; one retired on account of age under the benefits of the Retirement Fund. There were several miscellaneous resignations and on three forms no reason was given.

Perhaps other organizations have suffered more personnel problems than the State Board of Health. If they have, we sympathize with them.

## News Release

**K**EYED to the slogan, "Open the Door to Health," an educational campaign to make the nation better acquainted with public health nursing services will be sponsored April 7-13 by the National Organization for Public Health Nursing in cooperation with the U. S. Public Health Service. Thousands of communities in all sections of the country are preparing to take part in the observance which will be called "Know Your Public Health Nurse Week."

In endorsing Know Your Public Health Nurse Week, Thomas Parran, Surgeon General, U. S. Public Health Service, states "America today faces a healthier future as a result of the great strides made in this field of medical service during World War II. But this added medical knowledge can be used advantageously only if prevention, as well as cure, receives its proper emphasis. For this reason the observance of Know Your Public Health Nurse Week takes on added significance at

this time. Public health nurses play an important part in the prevention of disease, the control of epidemics, the early detection of remediable defects, and the adoption of good health habits by school children and adults."

The Sponsoring Committee for the "Week" includes: Mrs. Margaret Cullkin Banning, Mrs. August Belmont, Edgar Bergen, Bing Crosby, Alfred W. Dent, Mrs. LaFell Dickinson, Martha M. Eliot, M.D., Clifton Fadiman, Walter S. Gifford, Helen Hayes, H. J. Heinz, Walter Lippmann, Henry R. Luce, Dorothy Maynor, Basil O'Connor, Thomas Parran, M.D., Leo Perlis, Mrs. Franklin D. Roosevelt, Mrs. Gerard Swope, Channing H. Tobias, Mrs. Harry S. Truman, Mrs. DeForest Van Slyck, Thomas J. Watson, Ray Lyman Wilbur, C. E. A. Winslow, Dr. P.H.

A publicity kit, leaflets, a special poster, and a mat-advertisement for newspapers may be ordered from the National Organization for Public Health Nursing, 1790 Broadway, New York 19, New York.

## The North Carolina League for Crippled Children

**F**OR the eleventh year, the North Carolina League for Crippled Children invites its friends to share in financing its work during the Annual Easter Seal Campaign, March 21 through Easter, April 21. During the past year the generous contributions of the public made it possible to expand considerably the program of the League.

Among the services rendered by the League during the past year were:

1. **Medical care:** Specialized care to insure best possible physical correction included orthopaedic operations, orthopenture treatments, blood transfusions, clinical treatments, hospitalization, convalescent home care, and physicians visits to home.
2. **Artificial Aids:** Artificial limbs, ex-



- tension shoes, crutches, wheel chairs, glasses, hearing aids, and a plastic ear, were provided.
3. **Transportation:** To clinics, hospitals, and schools.
  4. **Education:**
    - a. Special training classes at U.N.C. for teachers interested in working with handicapped pupils.
    - b. A speech clinic.
    - c. A speech correction program in one city school.
    - d. Bedside teaching in hospitals and private homes.
    - e. Boarding school for pupils who cannot get to and from public school.
    - f. Educational publicity through conferences and bulletins to inform the public of the needs of crippled children.
  5. **Census:** Through the cooperation of the public schools, a survey is being conducted to discover the number of handicapped children in the State and to determine how many are not receiving needed medical care and education.
  6. **Other Services:** Referral to proper agencies of requests for services not available from the League. Interpretation to parents of children's condition and needs when the physician was unable to talk with parents. Supplemented services of other agencies for needs not included in scope of their program.

The League is a private social agency that cooperates with, but does not duplicate the work of, other public and private charitable organizations. Aids the crippled whether the condition resulted from accident, disease, infection or birth. Its only requirements for aid—a valid need not otherwise provided for. Its main source of funds—voluntary contributions during the Annual Easter Seal campaigns.

The consistent growth of the League during the past years reflects both the fundamental need for such an agency and the increase of public confidence in its program. Your contribution at this time will improve the lot of one or more crippled children. For whatever your heart prompts you to give, the children say "Thank you and a Happy Easter."

#### "A Better Life for Crippled Children"

Easter is important to everybody, and

everybody welcomes any symbol which brings home to him more vividly the significance of the season. The growing popularity of the Easter Seal, which is sold annually to help bring to crippled children those rights and opportunities which we feel everyone in our country should enjoy, demonstrates that it has come to enjoy the same affectionate place in our hearts as the other symbols of the season—the lily, brightly colored eggs, the Easter Bunny, the chime of church bells on Easter morning, the Easter Parade.

Every year the North Carolina League for Crippled Children joins in the national sale of Easter seals, proceeds for which are used in a continuous program to advance the welfare of crippled children and adults. This year the sale is being put on from March 21 to April 21.

Since the money raised during the sale supports a real program for them, the Easter season is a particularly important time of the year for crippled children. They feel that they should have their chance to take their places as useful citizens, to share in the production of goods and services when they grow up. Almost everybody would find it difficult to disagree. If America is to fulfill the fundamental democratic principle that everyone should have an equal opportunity to find a happy and useful life, then certainly we should not neglect the needs of our crippled children and handicapped youth.

It takes numerous agencies, both public and private, to add up to a good program for crippled children, but the Easter seal has come to stand for certain basic things which look toward making useful citizens of our handicapped youth. These include medical care, hospitalization and corrective treatment, including early discovery and early diagnosis, so that our future citizens will have a better chance of having a body as nearly normal as possible.

Another opportunity indicated by the Easter seal is that of education. Although some states are doing a good job of education for handicapped children, this is not true in the nation as a whole. It is estimated that only fifteen per cent of America's handicapped children are getting instruction in classes adapted to their needs.

We should give crippled children a chance to play, so that they can grow



up with normal contacts and proper social adjustment. We should give them, as they grow older, proper vocational guidance and training for the business of earning a living and helping make America strong and great. We should see to it that prejudices and legal restrictions are removed so that our handicapped youth can get a job and hold it.

The sale of Easter seals offers an opportunity for all citizens to share in this important work of building crippled children into happy and useful men and women. If you have not received seals in the mail and wish to contribute, write the North Carolina League for Crippled Children, Box 839, Chapel Hill, N. C.

#### **The North Carolina League for Crippled Children**

(by Miss Marie Adams Charlotte News)

It's Spring, and the youngsters,—who have "champed at the bit" during the bad weather which was old man Winter's final swat (we hope), are overflowing into every yard and playground, giving vent to their pent-up energies with boisterous games,—their Rebel yells echoing through the windows which we happily fling open every warmish day,—even though we may have to turn up the thermostat on the furnace come nightfall. Many is the cement walk bearing the chalked marks for a game of hopscotch; those smooth spots on the school yard, worn by tender Winter-coddled knees testify to marble game that flourished at recess; and soon we shall hear the crack of the baseball bat from the vacant lot down the street.

We don't like to think that there are pale, wan shut-in youngsters who can't romp and run, climb trees or race madly along on roller skates. The "milk of human kindness" never flows so freely as when stirred by the sight of a handicapped child, for the natural birth-right of every boy and girl is a strong, robust body and sturdy limbs, and the cause of those condemned to a wheelchair or crutches will jerk the heart-strings of even the most hardhearted.

The North Carolina League for Crippled Children will conduct its Annual Easter Seal Campaign from March 21 through Easter Sunday, April 21.

The funds raised during the Easter Season will help provide a continuance

of financial aid through counties for hospitalization and medical treatments of individual cases, as well as glasses, special appliances, artificial limbs, orthopaedic shoes, orthopenture treatments, blood transfusions and the necessary weeks of convalescent care.

In addition to medical care, the League lends assistance along educational lines by providing training for teachers interested in preparing themselves to work with handicapped children, and by sponsoring special classes in the public schools.

Returns from the Easter campaign in 1945 netted \$54,000, nearly double the receipts in 1944. Hopes are high for the success of the seal sales this year, and we can think of no more appropriate season to lend a hand in this fine work.

#### **Article X of the Crippled Children's Bill of Rights says:**

"In brief, not only for its own sake, but for the benefit of Society as a whole every crippled child has the right to the best body which modern science can help it to secure; the best mind which modern education can provide; the best training which modern vocational guidance can give; the best position in life which its physical condition, perfected as it best may be, will permit; and the best opportunity for spiritual development which its environment affords."

This is the eventual aim of the League for Crippled Children. As yet, funds and workers have not been adequate to supply all the services which would be required to provide this ideal program but, it is hoped that all can be made possible in the near future.

#### **Easter—Religious Interpretation**

Again we are approaching the Easter Season—that wonderful Season which brings new life, new hope, and new courage. Each new blade of grass, each tiny unfolding leaf and each budding flower reminds us that a new miracle of Resurrection is taking place before our very eyes, encouraging each of us to face the problems of the future unafraid.

The Easter Season, somehow causes us to want to reflect more deeply than usual and very tenderly upon the Life that the Master lives—that life which was so perfect that it resulted in a Resurrection and left the greatest of

all imprints upon the world. As we read the History of that Great Life, we see Him as He went about doing good—healing the blind to see, the deaf to hear, and the lame to walk.

In His teaching, He gave us principles by which to live, which if followed would make of all mankind one great brotherhood. He told us too that greater works than He had done would be accomplished by His disciples and followers, and as we see the miraculous results which modern science is able to bring about through the care and treatment of those whose bodies are maimed, we know that the day of miracles is not over. God has been good in allowing mankind the privilege of acquiring such great wisdom, but often the child so needing the practice of the great skill of a master surgeon is denied its healing possibilities because of lack of Money.

Humanitarian societies and welfare organizations are now attempting to put into practice the fact that we "are our brother's keeper" and trying to bring together, through the services of their agencies, the child (or adult) without funds but with such great need of the skill of a master professional man the artist who possesses the skill to supply the need. Through this practical adaptation of the principles given to us by the teachings and example of the Master, many persons have been enabled to live richer, healthier, more comfortable, and happier lives than would have been possible without the services of such agencies.

A recent short story carried the thought, "Heaven will descend upon the earth when man begins to utilize his abilities for constructive purposes for the benefit of mankind." In this year of 1946—the post war world—all thinking people are pondering over the proper ingredients for the formula which will establish a lasting world peace. If all mankind's abilities were directed toward those things only which were beneficial to mankind, to make his life healthier and happier, there would be little need to ponder further to find what ingredients would bring about that one great brotherhood of mankind which in itself would banish war and bring to the earth the true meaning of Easter—A World at Peace.

Among the constructive purposes to

which man can devote his energies are supporting the services of agencies which work for the social betterment and human understanding to under-privileged groups here.

Proceeds from the Easter Seal Campaign Program conducted by the North Carolina League for Crippled Children will assure the crippled children in our state that we consider their heritage and welfare to be equally precious with that of other children. In this way we can help a little to keep democracy—and its policy of equal rights—working at home.

### An Investment

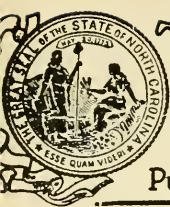
During the war you were frequently asked to buy bonds. That was a good investment for you will receive \$4.00 in return for every \$3.00 you spent. But this article is about a different type of investment.

At Easter time we have the opportunity of making an investment in humanity, by contributing to the Easter Seal campaign which supports the work of the North Carolina League for Crippled Children.

The services of this organization are designed to help make useful and contributing citizens of our handicapped children. This work is, of course, a humanitarian effort, but when we realize that it is a means of providing needed medical care, education, social and vocational training, it becomes an investment. It costs less to prepare a handicapped child for earning his own livelihood for the remainder of his life than to support him for a single year as a ward of the state.

Preparing him for useful citizenship may require medical treatment and long days or weeks in the hospital. It may require home visits from a teacher instead of regular attendance at school. Psychological service is important for the success or failure in life, for a handicapped youngster depends greatly upon the early assistance and understanding he is given to help him overcome his handicap. Vocational training is almost always a specific requirement for a crippled child, for he must build up his abilities and capitalize on the faculties he has left in order to minimize his limitations. America's children will bear the responsibility of our Nation's tomorrow. Crippled Children will have to share this responsibility.





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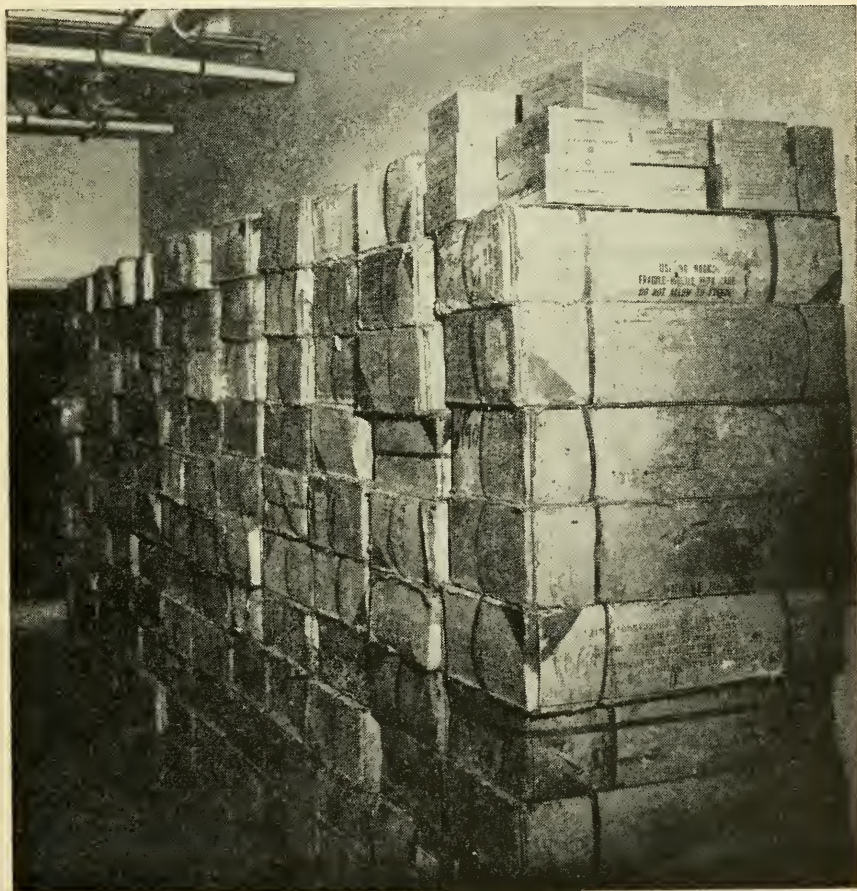
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## FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

## SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters.)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

## Public Health in Postwar Days

By R. L. CARLTON, M. D.

Health Officer, Winston-Salem, N. C.

**F**ORTY years ago I graduated from the School of Medicine of the University of Maryland. Since then I have spent 11 years in general practice and 29 years in preventive medicine, or as we usually term it, public health. Those 40 years have brought many changes, many advances, many improvements in medicine both curative and preventive.

**Consider Communicable Disease.** If we are to lessen the incidence of communicable disease as it should be lessened we need the cooperation of every citizen. Dr. Charcot said in 1857, nearly 100 years ago, "Disease is very old and nothing about it has changed. It is we who change as we learn to recognize what was formerly imperceptible."

The problem of preventing communicable diseases is the joint concern of parents, school administrators and the local health authorities. One of the serious results of the transmission of disease is reflected in the high death rate produced in small pre-school children to whom the older children carry these diseases after contracting them in school. United efforts on the part of parents, school authorities and local health workers can do much in reducing communicable diseases to a minimum and eliminating serious epidemics. Control measures must be set on the appearance of a case. The family physician must be consulted when an illness appears.

A number of communicable diseases which have not been evident during the summer months usually begin to increase in prevalence on opening of schools. Probably the increased prevalence is not due entirely to the open-

ing of schools but rather to the fact that most communicable diseases are largely fall and winter infections. Diphtheria and scarlet fever, for example, increase rapidly from the middle of September until January. Measles and whooping cough, though springtime diseases, begin increasing with the opening of school and continue to increase, reaching a peak in the months of April and May. Influenza, pneumonia and the common cold reach their peak of prevalence during the cold, damp winter months.

Prevention of communicable diseases depends upon the application of two basic principles—you all know what those principles are: isolation and immunization. Isolation is the more expensive and difficult to carry out completely, as we are all aware. It is however the method of controlling some communicable diseases and should be used. Immunization is more practical and more economical in preventing those diseases of childhood for which we have a proven immunization agent. Closing of schools to control an epidemic is not satisfactory and should not be used except as a last resort when other methods of control have failed.

Every child before entering school should receive diphtheria toxoid, whooping cough vaccine and smallpox vaccine. These protective measures should be carried out early in life. However, if such protective measures have been neglected they should be done on the child's first admission to school. Here in North Carolina these protective immunizations are required by law, you know, before the child enters school.

These are truisms to you. Every public health worker is familiar with the statements I have just made. **Prevention is the goal for all of us.** To be sure there is no argument about that—but I wonder if sometimes we do not become weary in repeating over and over to parents and to school folks these facts which are so evident to us but which to others may not take on the same important proportions? Do we try just as diligently as we should to secure at the beginning of school surveys of the immunity status of the children of the grade or rooms under our supervision? Such records are valuable when communicable disease appears in that school, but they are troublesome to secure. The line of easiest resistance is to pass them up. Let's remember that if our own little Johnny or Mary should develop whooping cough and a pneumonia or some such disease in one of the school rooms in which any of these procedures had been omitted our own viewpoint of some of these seemingly trivial things would be different—we might then be more interested.

**Diphtheria is still a menace.** Apparently diphtheria is on the increase. During 1944 there were 11 reported cases of diphtheria in Forsyth County and Winston-Salem. In 1945 there were 20 cases. This situation is not local so far as our county or state are concerned. Reports are coming from Europe that diphtheria exists there as the most prevalent communicable disease. The war-engendered disorganization of public health facilities probably has much to do with the situation in Europe. Probably also, wartime changes have influenced the apparent increase in this state.

Will further increase in number of cases, or severity of disease occur as a result of soldiers returning as carriers of more virulent strains of the bacilli than are already present here?

Early diagnosis, isolation and quarantine, prompt and effective treatment of cases and carriers, good school, eating place and home hygiene and pasteurization of milk all assist in preventing the spread of the disease. The most important measure, however, you know, is active immunization. All children should be immunized against diphtheria during their first year. This statement needs to be repeated over and over again with all the variations there are

until parents have it fixed in their minds once and for all that their young children must be protected against diphtheria. **The answer to the diphtheria menace is immunization of 100% of the children.**

#### **What is a Local Health Department?**

A local health department is an organization set up in the community (and the community may be city or county or both or a district of several counties) at the request of the people, to give them public health protection, to help them in finding and defining their public health problems and in using all community and state resources in doing something about them.

Our local health department is made possible through an agreement between the state of North Carolina, the city of Winston-Salem and Forsyth County. The department has to offer health protection for the community. This protection includes: measures for the prevention and control of communicable disease; problems in sanitation; maternal and child care; school health service; venereal disease control; tuberculosis survey and control; educational measures in order that every citizen, regardless of age and economic level, may share in an understanding of how to conserve human life; and other public health problems which are presented by changing conditions.

The postwar season should stimulate continuing constructive planning for local health departments where both knowledge and experience essential to physical and emotional well being will be greatly needed. We are told that three quarters of a million lives a year are being saved in these United States by the application of the principles of modern public health. Isn't it a grand and glorious feeling that each one of us has had a real part in a public health program which has helped to save nearly a million lives in a year?

We are glad our department has a health education division and that there is a community Health Council—both of which are encouraged by the State Health Department. These activities are fundamental steps which need to be taken in order that all citizens may understand and appreciate the values which a local health department can bring them. It is greatly hoped that adequate personnel in the field of public health will be returning soon for

civilian service and will be available to our department and others needing such service.

So, in brief, you might say that our department surveys the area, finds pertinent problems and assists in doing something about them. Some of the activities in which our department has had a hand are:

- A safe milk supply,
- A pure water supply,
- Adequate sewage and garbage disposal,
- A sanitary code for food handlers,
- An immunization program,
- A tuberculosis survey,
- A venereal disease control program,
- A well child conference,
- School health service including dental clinics,
- A general preventive disease program,
- A larger use of consultant services to schools and community groups,
- Diagnostic laboratory service, etc.

**The Community Health Council.** We are not to consider ourselves and our department of health the last word or the last effort that can or will be made to secure all the benefits of a public health program. There is a danger that we may become so imbued with our ideas of our own importance that we will overlook the benefits to be derived from the assistance of a health council or similar organization. Individuals themselves have important responsibilities for looking after their own health—but when community needs are studied then group action necessarily enters into the picture.

Every health department, including our own, might do well to have a permanent motto on every bulletin board saying—"Health is the concern of society." We are well aware of the fact that communicable disease and the dangers of epidemics are historic reasons for society's concern and for community action for keeping well. Those of us who remember as far back as 1916 will recall that the Winston-Salem Department of Health was brought into being because of a scarlet fever epidemic.

Always the best plans are made by those persons who will use them. Guidance and consultant service may be needed from those especially trained in a particular field, but the plans, if they are to be successful, must be carried

forward with aid from the citizens of the community.

The Community Health Council is a representative group of citizens in a city or county—a pocket edition of the larger community. It has as its members representatives from all groups, agencies and organizations in the area; schools, churches, medical and dental professions, business, industry, public health, city and county officials, clubs, agencies, and organizations — federal and local.

Now, a health council having in its membership representatives from so many groups is worth cultivating, perhaps to a much greater extent than we have done. We should remember that the health council works toward coordinating all the groups in the community whose responsibilities are in any way associated with health improvement. For example, there may be a committee on tuberculosis, one on school health, others on sanitation problems, dental care, immunization, visual aid, nutrition or cancer control. With such committees expanding as needs arise and making surveys of problems and reporting to the larger groups, they work out plans for meeting many problems that affect healthful living.

Organized effort with active participation by all the citizens in this first postwar year and in succeeding years can mean great progress in the things worthwhile in any community.

In this department let us not lose an opportunity to align ourselves wholeheartedly, enthusiastically with the community health council.

**We Must Increase Our Safeguards for Mothers and Babies.** The maternal mortality record for recent years in this city and county are significant. That less than 2.15 mothers per 1000 babies born died annually is a dramatic demonstration of good medical and hospital service and the worth of continued education among mothers.

Our infant mortality rate, while much lower now than a decade or two ago has not reached the low level that all health workers should like to see achieved. This means that while good medical hospital service was available and many immunizations for whooping cough and diphtheria and smallpox were given there were still too many deaths of infants. Babies need good



supervision in infancy; they must be protected from exposure to disease; they must have proper rest and sleep and exercise and feeding schedules.

Our responsibilities to the mothers and infants of Forsyth County are clearly outlined before us—more maternity and infancy work, more and better well baby stations, more instruction of mothers, more pre-natal and post-natal visiting, more immunizations of babies and so on and on.

In the final record let it not be accredited to this health department that any of our little ones failed to live and grow and develop because of our failure to live up to our responsibilities in every respect.

A word about **Public Health Nursing**. We will no doubt find that **wartime health needs will influence peacetime health service**. Wartime demands have called for increased emphasis and in some instances an expansion of certain services in which the public health nurse participates. Because of this expanded program the trend during peacetime will almost surely be toward continued expansion rather than curtailment of public health nursing services. As a result of the war there is an awareness of physical well being in the minds of the general public through which has developed a better understanding of nursing as an important part of a community health service. Large scale industry in the past four years has caused marked expansion in industrial nursing in many places including our own community; the EMIC program has expanded public health nursing services for the care of mothers and infants; the increasing use of X-ray units, both mobile and stationary, is finding many hidden cases of hidden tuberculosis and this calls for effective follow-up work meaning greater emphasis on public health nursing services in this program.

Further, the demands of the returned veteran must be considered as having a place in a public health nursing service. Rehabilitation, physical and mental, ranks high in these demands. The public health nurse has a great responsibility in assisting the veteran's family to help him become restored to civilian life. The general public will be requesting more information regarding a local health service and this must be responded to through expanding health

education programs in which the public health nurse participates. It is safe to predict that these increased demands for a greater peacetime service that have resulted from wartime needs will cause public health nursing to go forward to even greater achievements than ever before. Shall we be on the band wagon? Think it over!

May I mention **Nutrition**? A five day diet check by 700 rural school children in a mid-western state done a few months ago showed only one in 14 children reporting a quart of milk a day. Half the children showed, by their own reports, that they had less than half the recommended amounts.

What is the significance of such deficiency? It means, first of all, that there is likely a correspondingly low intake of the other protective foods. That proved to be true in the diet survey just mentioned in which only one in 7 children reported adequate fruits and vegetables, and only half the group showed they had enough body building foods. It is such diets that play a great part in bringing about the poor body structure, defective teeth, impaired vision and other physical weaknesses which the selective service examinations revealed. Our children's food must be carefully selected if we are to avoid repeating our mistakes. Malnutrition is something each of us rarely applies to himself or his own family. We believe our children develop less rapidly than others because it's a family trait to be small!

Dr. Thomas Parran of the United States Public Health Service has said, "—more children and adults alike suffer from faulty nutrition than any other form of physical impairment except dental defects, which is one result of an improper diet. It is high time we act, for our present knowledge of nutrition shows definitely that the future of the race will depend upon the food we eat, and to a greater degree than in the past we have profited by control of communicable diseases."

Let us lose no opportunity to help instill the principles of good nutrition. There are many chances for cooperation with other groups and other workers who are interested in and working for better nutrition: dairy council, home economic groups, school dietitians, teachers and others. Many opportunities come to us for individual instruc-



tion in the clinics, baby stations, in the homes and schools, with health clubs and groups, etc. Let no one of us lose an opportunity to combat malnutrition in Forsyth. This part of any health program is important.

#### Health Education in Public Health.

The health education program in a department of health cannot be interpreted as "one program" but rather it is the application of the principles of education to all phases of the public health program. The health officer, the public health nurse, the sanitarian all use education as the avenue through which they reach the public and with them develop an understanding of what are the community needs and how these needs may be met through the cooperation of the community, and the use of all available resources.

Besides this general use of the tool of public health education by all the personnel there is still need for an especially trained staff in public health education who can provide consultant service. This personnel is concerned with bringing to the public through news releases, publications, visual aids and discussions the services of each division of the department of health. It is concerned with consultant service in schools. It is interested and in some states is developing practical programs in healthful living in cooperation with all the agencies concerned with health. Health education workshops have been developed in the last few years in some teachers colleges. High schools are more and more feeling the need of courses in personal health and human relationships. The increasing requests for public health literature on many subjects here and elsewhere are another evidence of growing public interest in health matters.

At this time there are probably more Women's Clubs, Business and Professional clubs, civic clubs, social agencies and other service organizations actively surveying their communities and finding public health problems that need their attention than at any previous time in the past three or four decades. No health department, including our own, can afford to neglect to grasp such opportunities as these surveys by interested groups offer.

Through modern public health education a comprehensive far-sighted goal is set up for us. It includes:

- A good birthright for every child;
- An understanding program for youth toward optimum health;
- A recreation program that reaches all the people;
- A health education program based on living in every school and college;
- A better understanding of how to keep well and control communicable diseases;
- A community free from insanitary conditions;
- An individual and group responsibility for community health;
- A lengthening of the span of life through application of public health measures;
- The improvement of human living—physical, mental, social and emotional.

A big order, you say? Yes, but it can be done. Let us practice what we preach.

So, I come back to my subject, PUBLIC HEALTH IN POSTWAR DAYS, and ask, What are we planning for? I have suggested no definite plan or program, and do not now but I do say that this health department must have as its objective and work faithfully toward that end a program or line of work activities which will lead to:

1. A closer cooperation between all agencies and organizations in the fields of education, welfare and service toward improved community life.
2. Increased control of communicable disease.
3. Continued lowering of maternal and infant death rates.
4. Expanded laboratory facilities to meet needs.
5. An expanding educational program with community participation.
6. An increase in the number of public health nurses.
7. Strengthening the tuberculosis control program through larger use of the X-ray unit and by other means.
8. Enlarging the venereal disease control program to meet needs.
9. A larger use of vital statistics and their significance in guiding us to problems in conservation in human life.
10. An awareness in every community of sanitation problems and the leadership to work for their solution.
11. An expanding nutrition program.
12. A larger expenditure per capita for public health.

13. Adequate medical care.
14. Expansion of school health services including dental care.
15. Lowering the annual death rate for all diseases through prevention and control measures where science and education point the way.
16. A recognition of our responsibility in developments that may grow out of bills now in Congress for health, medical care and hospitalization.
17. Helping the service man find a responsible place in the community, helping him to keep well and to feel that he is sincerely needed in the community's life.

## The Value of Health Education

BY WILLIAM H. RICHARDSON

North Carolina State Board of Health  
Raleigh, North Carolina

SPRING breathed its warm benediction early this year over the campus of the University of North Carolina, where the old meets the new, and the twain become one in the advancement of the high purposes of true educational brotherhood. There was something about this recurring natural phenomenon that inspired hope and set the mind on better things in the offing.

The old University at Chapel Hill, mother of higher education in this State, has nurtured many sons—and daughters—during the years that have given it antiquity, but from its breasts the milk of educational kindness has never ceased to flow in abundance for those willing to receive it as a strengthening element. Its foundations have remained strong, and deep and broad, capable of giving room to those newer enterprises in the field of education that have developed along with the increasing needs of our people.

Intellectual health is necessary to the growth and development of any people; but, as necessary as intellectual health is, it is but one of the attributes of a well-rounded life. It is fitting, therefore, that intellect should be properly housed, in a sound body. Mind and body are interdependent, each necessary to the other's well-being.

It is entirely fitting that the North Carolina School of Public Health should have been located at a cultural center, such as Chapel Hill. You have heard and read much about this great institution, of which the eminent Dr. Milton J. Rosenau was the first dean. A symbol of the advancement which Public Health has made in recent years, it is a product of that advancement.

During four days in March, the North Carolina School of Public Health sponsored the first of a series of institutes on public health education, which was attended by more than two score public health workers from this and adjoining states. This particular institute was dedicated to a study of public health administration. Others scheduled were: a working Conference for University of North Carolina Health Educators, March 20-23, and an Institute on Food-Handlers' Courses, during the summer.

The objectives of these meetings—or institutes—are: To assist State and local leaders in public health in defining the problems and determining the needs of areas in which they work; to offer State and local leaders in public health an opportunity for an exchange of ideas with outstanding representatives from the field of public health; to help State and local leaders in public health find ways of solving their problems, and to contribute to the development of a sound, progressive public health program for the nation.

The opening institute on public health administration began with registration at 9 o'clock Monday morning, March 4, and continued through Thursday noon, during which time those in attendance heard many eminent public health authorities discuss administrative measures in a very helpful way.

The list of institute leaders included: Dr. Carl E. Buck, field director, American Public Health Association; Dr. George Darling, Vice Chairman and Secretary, Division of Medical Sciences, National Research Council; Dr. Mayhew Derryberry, Chief, Field Activities in Health Education, United States

Public Health Service; Dr. Roscoe P. Kandle, Associate Field Director, American Public Health Association; Dr. Hugh R. Leavell, Assistant Director of the Medical Sciences, Rockefeller Foundation; Dr. Joseph F. Mountin, Assistant Surgeon General, United States Public Health Service; Dr. George T. Palmer, Director, Personnel Training, United States Public Health Service; Dr. Milton J. Rosenau, School of Public Health, Chapel Hill.

Here we have an important array of those whose efforts are devoted to the promotion of public health. All these are men of both vision and experience.

On the opening day of the institute, representatives were enrolled from Florida, Georgia, Kentucky, North Carolina and West Virginia. South Carolina also was represented later in the program.

During the course of the institute those in attendance studied the evaluation schedule of the American Public Health Association, designed for use in the study and appraisal of community health programs.

This schedule contains important questions concerning a local health program, and is designed to aid in the visualization of problems, and to provide a basis for the evaluation of services rendered. It is intended to prove valuable to any community in program planning, and to increase popular understanding of public health objectives, local needs and desirable administrative practices. It does not include all the questions which might appropriately be asked, and it omits some pertinent items, because as yet no satisfactory criteria are available for their evaluation.

It was pointed out that the successful maintenance of a public health program depends upon a clear identification of the local health problems and wise planning in the use of local facilities to meet these problems, in the order of their importance.

Public understanding of health problems and preventive medicine is basic to the support of a public health program. Here we have the crux of the matter. No matter how well trained may be the personnel that administers public health activities, there must be an understanding on the part of beneficiaries, that is, the public at large. Misunderstanding—or, shall we say, the

lack of understanding?—is responsible for failure in many lines of human endeavor. Take immunization against disease, for example. We know that certain diseases are preventable—in many instances, such as smallpox, diseases which formerly took a heavy toll of human life, year after year. Now, we rarely hear of a death from smallpox. But smallpox is a hideous, spectacular disease, which mars the countenance and leaves its scars on the body. People do not like to be marked, either as victims of disease or as malefactors. Diphtheria also is preventable, and yet diphtheria deaths continue to occur, even though there are laws requiring immunization against it. Now, diphtheria may not leave visible scars, but it is more crippling in its after effects, perhaps, than smallpox. An attack often is followed by results which go with the victim through life. Just why this disease is allowed to continue among us is one of those sixty-four-dollar questions which, as yet, remains unanswered. This emphasizes the point, made earlier, that health education is no one-sided proposition. The public must be educated, as well as the public health worker, and the successful public health worker is one who **can** and **does** do his or her part toward educating the public in procedures that protect health. Therefore, increasing emphasis is being placed on the importance of public health education, from an all-inclusive standpoint. We can pass all the laws we want to, but until and unless we educate the public to adopt protective and preventive measures, we will not be able to paint a perfect public health picture.

Doubtless, if it should be announced today that children could be immunized against infantile paralysis, the office of every practicing physician and public health officer in the United States would be filled tomorrow morning with parents, bringing children to be immunized. And yet, the death rate from diphtheria in North Carolina in 1945 was 2.5 per 100,000 population, as compared with only 0.3 from infantile paralysis. Both are crippling diseases. One is preventable, the other, so far, is not—yet, diphtheria is far more prevalent every year than poliomyelitis. A health-educated public could wipe out diphtheria in a comparatively short time—



that is, a public willing to put knowledge to work.

Pellagra is preventable and curable through use of the proper kinds of food, and yet people who are unwilling to study and put into practice the sound principles of good nutrition go on dying as the result of this disease. There were 72 such deaths in North Carolina last year, but, at that, not nearly as many as there were before emphasis was placed on nutrition as a public health responsibility.

We might continue along this line indefinitely, pointing out many instances where human life could have been saved by gaining knowledge and then putting that knowledge to work.

Public health educators, such as those who met for a conference in Chapel Hill, March 4-7, have dedicated themselves to the task of not only becoming informed themselves, but of passing the best available information on preventive medicine to the people, for their guidance and protection.

## News Release

A \$10,000 grant for a scholarship fund to prepare nurses for teaching and supervisory positions in tuberculosis nursing has been made to the National Organization for Public Health Nursing by the National Tuberculosis Association, it has been announced by Dr. Kendall Emerson.

Applications will be reviewed by a Tuberculosis Nursing Scholarship Committee set up for this purpose with Miss Alta E. Dines, director, Division of Education Nursing, Community Service Society of New York, as chairman. Requests for a scholarship will be accepted until May 31 from any nurse interested in tuberculosis, but in making the awards preference will be given, according to Miss Dines, to nurses with experience in tuberculosis nursing and supervision. Applications should be sent to Mrs. Louise Lincoln Cady, tuberculosis consultant, National Organization for Public Health Nursing, 1790 Broadway, New York 19, N. Y.

that date. Additional applications will be acted upon in due course.

Columbia University School of Public Health

Harvard University School of Public Health

The Johns Hopkins School of Hygiene and Public Health

University of California School of Public Health

University of Michigan School of Public Health

University of Minnesota School of Public Health

University of North Carolina School of Public Health

University of Toronto School of Hygiene

Yale University School of Medicine, Department of Public Health

### INSTITUTIONS ACCREDITED BY THE AMERICAN PUBLIC HEALTH ASSOCIATION TO GIVE THE DEGREE OF MASTER OF PUBLIC HEALTH (DIPLOMA OF PUBLIC HEALTH IN CANADA) FOR THE ACADEMIC YEAR 1946-1947.

This list is released by the Executive Board of the American Public Health Association as of January 25, 1946, on recommendation of the Committee on Professional Education, and considers those institutions from which requests for accreditation had been received to





## Notes and Comment

**Y**OUTH is not a time of life—it is a state of mind. It is not a matter of ripe cheeks, red lips and supple knees; it is a temper of the will, a quality of the imagination, a vigor of the emotions; it is a freshness of the deep spring of life.

Youth means a temperamental predominance of courage over timidity, of the appetite of adventure over love of ease. This often exists in a man of fifty more than in a boy of twenty.

Nobody grows old by merely living a number of years; people grow old only by deserting their ideals. Years wrinkle the skin, but to give up enthusiasm wrinkles the soul. Worry, doubt, self-distrust, fear and despair—these are the long, long years that bow the head and turn the growing spirit back to the dust.

Whether seventy or sixteen, there is in every being's heart the love of wonder, the sweet amazement at the stars and the starlike things and thoughts, the undaunted challenge of events, the unflinching child-like appetite for what next, and the joy and the game of life.

**You are as young as your faith,** as old as your doubt; as young as your self-confidence, as old as your fear, as young as your hope, as old as your despair.

In the central palace of your heart there is a wireless station; so long as it receives messages of beauty, hope, cheer, courage, grandeur and power from the earth, from men and from the infinite, so long are you young.

When the wires are all down and all the central palace of your heart is covered with the snows of pessimism and the ice of cynicism, then you are grown old indeed and may God have mercy on your soul.

—Anonymous.

\* \* \*

**GERIATRICS**—A new medical journal has been created—Volume I, Number I of **GERIATRICS** has come off the press. To all of us who are old or who are getting old this Journal brings a ray of hope for we wish to grow old graciously. The word "geriatrics" was coined by Dr. I. L. Nascher in a paper which was published in the New York Medical Journal of August 21, 1909. It

is derived from the word "geras," old age, and "iatrikos," relating to the physician. In this article he gave us our modern concept of caring for the aged:

"Childhood has received special attention by physicians and a special branch of medicine has been assigned to it. Senility has received the attention of but a few investigators; aside from these it receives no special consideration, its manifestations are considered pathological conditions of maturity, and its diseases are treated as though they were diseases of maturity occurring in individuals who have a weak constitution. Having an individuality of its own as clearly defined as childhood, with anatomical features, physiological functions, diseases, and their treatment differing from maturity, it should be considered apart and distinct from maturity, and as a special branch of medicine. To such specialty I would apply the term geriatrics."

The following table of contents gives us some idea of the field which this new medical journal will cover:

Geriatrics: The General Setting, Edward L. Tuohy, M.D., F.A.C.P.

The Incidence and Treatment of Delirious Reactions in Later Life, Edwin J. Doty, M.D.

Tuberculosis among Persons over Fifty Years of Age, J. Arthur Myers, M.D., F.A.C.P.

Some American Contributions to the Literature of Geriatrics, William Dosite Postell

Geriatric Anesthesia, E. A. Rovenstine, M.D.

Geriatrics and Postwar Problems, Malford W. Thewlis, M.D.

Mental Disorders of Old Age, Harold D. Palmer, M.D., F.A.C.P.

Bronchial Asthma with Special Reference to its Elderly Victims, Jonathan Forman, M.D., F.A.C.P.

\* \* \*

### Digests from Current Literature

In the first article—"Geriatrics: The General Setting," Dr. Edward L. Tuohy outlines the probable scope of this new field of medicine. He emphasizes the importance of economics, nutrition and soil conservation.

North Carolina contributed one Sur-

geon General to the United States Public Health Service—Dr. Rupert Blue, who some thirty years ago stated in substance, "The most important contribution to public health would be a living wage for every worker." I would appreciate it, if some of our readers would give us the exact quotation, since it would be a worthy companion to Biggs' often quoted statement, "Public health is purchasable within natural limitations—every community can determine its own death rate."

A few quotations from Dr. Tuohy's paper seem appropriate:

"Doctors are reputedly singularly lacking in interest concerning what is happening to the productivity of our own American soil. Yet it behooves them to be concerned, for it is a problem basically related to that of medicine. It is estimated that improper farming, including the deforestation of large areas, permitting soil erosion, has destroyed for generations to come nearly one fourth of areas once satisfactorily agricultural.—

"If we are successful with this American type of ideology and planning for wholesome existence, people are going to live still longer, and, we hope, better. The medical and economic problems of the aged are becoming ever more immediate and challenging.—

"To those concerned with the new field of geriatrics a number of considerations emerge from the general situation.

"1. Our society must not drift toward a situation in which men and women over sixty are considered "barnacles on the ship of state." We need everyone contributing his mental if not also his physical faculties to aid in maintaining a high standard of living—a culture in which every worthy person adds his share of effort and secures his reward.

"2. This objective cannot be accomplished by junking the basic principles involved in industrialization. On the contrary, rehabilitation of backward countries—India, as an example—can be accomplished only by establishing and perfecting suitable industrial methods.

"3. When we encourage great concentrations of population widely separated from the soil that feeds them, we are encouraging a breakdown of the family unit. Ultimately pensions, legacies, and

insurance drive more and more people into the arms of the state. We have loudly asserted that in free America the individual does not belong to the state. It is indeed well that we shall prove and demonstrate our adherence to that most worthy of all programs.

"4. The problem of doctors, hospitals, and all associated with them; the difficult issues involved in prepayment plans; the problem of the distribution of doctors throughout the land—all are very closely tied up with the manner in which we use or deplete our natural resources. Much of the criticism that comes to medicine because of faulty distribution of its services stems from the problem involved in the unfair and unwise use of the soil. Everything we have and subsist upon comes from the earth. The rule of rapid depletion, so long a part of American life, should cease.

"5. These and many other items are definite problems, social and economic, worthy of consideration and analysis in the pages of a journal devoted to the care of the aging. In a badly planned general economy the aged have little occasion to be grateful for life extension."

Dr. J. Arthur Myers' "Tuberculosis Among Persons Over Fifty Years of Age" contains valuable information to physicians. His concluding paragraph reads:

"Adequately to prevent tuberculosis in the aged, one must start with infancy and protect against contamination with both the human and the bovine type of tubercle bacilli throughout the decades of life. As long as we permit children and young adults to become infected with these organisms, there is no escape from both primary and reinfection types of tuberculosis when they become elderly. Primary tuberculosis does not result in dependable immunity, and to date no artificial immunizing agent offers significant hope of protecting elderly persons against the disease. For those now beyond 50 years who have tuberculosis, prevention consists of protection against reinfection from exogenous sources. Such infections are just as dangerous to elderly persons as to those in earlier life. We have no way of preventing endogenous reinfection. Our only recourse is to examine periodically those in whom such reinfections are a pos-

sibility, and treat promptly if and when they appear."

The Editorial Board is as follows:

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From the Editorial "Good Old Age," written by Dr. A. E. Hedback, we find "As we launch Geriatrics on the sea of medical journalism we naturally hope for its friendly welcome.

"The increased span of human life in recent decades is admittedly attributable to progress in child care. Pediatricians are now bemoaning the fact that theirs is a vanishing specialty. They support this view on the basis that diets and inoculations against childhood diseases have well-nigh eliminated these disorders and that their activities are therefore limited to prevention. An office nurse often presides over the program of immunology according to a well-accepted time and dosage schedule furnished by the pharmaceutical house supplying the required material. In like manner it may be said that anyone capable of reading a slide adjusted to the age and weight of the child can usually prescribe the proper food formula.

"Tuberculosis, according to Dr. Haven Emerson in his John W. Bell Lecture before the Hennepin County Medical Society in Minneapolis in December, 1945, will be entirely eliminated from our fair land by the end of the century. He quoted statistics of progress to substantiate his contention.

"Typhoid fever is the outstanding example of what modern sanitation has done to eliminate infectious diseases of the alimentary canal. This disease, once prevalent, has become so rare

that clinical teachers are hard pressed for an adequate supply of cases for demonstrations before their classes. Wonderful advances have been made in the treatment of syphilis.

"These are some of many examples that must come to the mind of every thoughtful student of medical progress. What must be equally apparent to every conscientious observer of trends is that the advances referred to have had chiefly to do with the infectious diseases that attack us before middle life—which Charles H. Mayo loved to describe as that time of life when one quits growing at each end but continues in the middle. His illustrious brother, William J. Mayo, a master at commanding attention with a first-sentence pronouncement, once said when he rose to speak in a symposium on cancer at the University of Minnesota Medical School: "Cancer is a curable disease." He paused for a moment to permit this oracular statement to seep in and then proceeded to defend his assertion by stressing the necessity of early diagnosis and the recognition of a precancerous stage.

"As everyone knows, life does not begin at forty, nor does it end at forty. We might say that life begins to end at forty, because from that time on metabolic diseases take a quickening toll. This is where geriatrics comes into its field.

"It is the aim of geriatrics to prolong life, not in misery but in comfort; to make for a serene and beautiful twilight time of life."

Also on the Editorial Page we find the following:

**"Indiana State Board of Health Creates Division of Geratology—**

"In accordance with an act passed by the last session of the Indiana General Assembly, the Indiana State Board of Health has created a Division of Geratology, with Dr. William F. King as Director.

"Because public health administration, together with medical knowledge and practice, over the past fifty years has so greatly extended life expectancy, the number of people living in older age groups is increasing more rapidly than in any other age group. The Indiana State Board of Health believes that through study of the factors affecting advancing age and the application of knowledge now available, or to be made



available through study and experience, concerning the diseases and disabilities of age, not only may the years of life be increased in number, but also that increased happiness and usefulness may be added to these years.

"In 1900 approximately 18 per cent of the population of the United States had reached the age of 45 and over. The census of 1940 showed that 27 per cent of the total population were 45 and over. The Census Bureau, by projecting the present trends in population age to the census of 1980, predicts that in that year those of 45 and over will constitute more than 40 per cent of the total population. The number of men and women in the State of Indiana who today have attained the age of 60 and over is in excess of 350,000. The number in this age group in the continental United States is estimated at above 13 million. Within the census decade of 1930 to 1940 there was an increase of 35 per cent in the number of persons of age 65 and over. In contrast, the total population increase was but 7.2 per cent in the same period.

"The aging are here in numbers that will not only continue but increase.

"The primary objectives of the Division of Geratology of the Indiana State Board of Health, as outlined in the following statement of principles and objectives.

"1. To study the factors of life that are related to senescence and its opposite, senility, as these are influenced by age, environment, heredity, and the diseases and disabilities associated with advancing years.

"2. To be interested in and plan for the care and well-being of that part of our population whose advancing years and life experience entitle them to the best protection and support that medical knowledge and care can provide.

"3. To help the public to know that senescence is normal; that senility is no more a necessary part of age than is rickets of childhood; and that through understanding and effort much of the premature deterioration of age can be prevented.

"4. To have the public informed on all helpful preventive knowledge concerning the diseases and disabilities of advancing age, and to encourage the medical profession, through teaching and practice, to become interested in the problems of age, particularly in the

anticipation of preventable diseases of age and advancing years, in order that the highest results possible may be attained.

"5. To co-operate with and assist as far as possible both the public and medical profession, as well as public officials and others, in a full appreciation of the economic, social, and cultural value and usefulness of men and women who, by reason of age and experience, will to an increasing degree constitute an important group of our population.

"6. To be interested in all laws, rules, and regulations, legislative, industrial, social, and otherwise, which may affect the well-being and usefulness of old age, and to seek the improvement of such laws, rules, and regulations as may affect old age adversely."

A sizeable proportion of North Carolina's population is in the age group which will receive special study by the physicians interested in this publication "Geriatrics." North Carolina has a special interest since the current President of the American Geriatrics Society is Dr. Wingate M. Johnson of Winston-Salem. We have endeavored to introduce our readers to this medical journal because it is our belief that it will be a source of material which will not only interest but help those who whether they like it or not will grow old. Old age should be a pleasant period of life. The medical profession can do much to make it so.

\* \* \*

**GARDENS**—The Secretary of the United States Department of Agriculture has issued an appeal that Americans have gardens. Our own Governor Cherry has appealed to North Carolinians to plant gardens and cultivate them diligently. The sun and the warm breezes are making their very enticing suggestion that we plant something to eat. Back of these appeals are urgent needs. The newspapers tell us that five million humans scattered throughout the world are in danger of starvation. We in our own way can help save these persons if we will produce food. Even though what we grow may not be shipped to them, it will conserve food which can be sent to them. Even if we are not interested in starving humanity, we still have good reasons for growing a garden. The food which we grow ourselves tastes much better than the food

grown by others. It not only tastes better but it is better even when we discount the satisfaction of eating something which we have produced ourselves. The fresher vegetables are the more vitamins they contain. We can promote nutrition and serve the interest of economy and humanity by growing foods which we can eat. North Carolinians are blessed with favorable climate and a productive soil. It is now time for us to transfer our gardening interest from the armchair to the soil.

\* \* \*

**TRICHINOSIS**—A few weeks ago a small outbreak of Trichinosis was reported in Connecticut. This disease in man is caused primarily by the eating of improperly cooked pork. Although we do not have many cases of Trichinosis in North Carolina, the information contained in the weekly bulletin of the Connecticut State Department of Health should be of interest to us.

"Trichinosis is most often found among certain nationalities who prefer to eat raw pork, or among people who raise their own pigs and slaughter them at home. There has been an occasional outbreak from eating cold cuts made from pork which has not been adequately processed. The usual story is for members of a family to become ill with this disease a week or two after having eaten pork roast or some sausage meat which has been insufficiently cooked.

#### **Methods of Control by the Meat Industry**

The problem of trichinosis has been considered by the meat dealers for many years. In Germany where a great deal of raw pork has been consumed, a system of microscopic inspection of the meat was devised, but this method is very expensive and requires a vast corps of inspectors. Furthermore, it is not 100 per cent perfect. In this state, all meat bought or sold in interstate commerce is examined by inspectors from the U. S. Bureau of Animal Industry. This includes meat from the large packing houses. In the case of animals slaughtered within the state for local consumption only, the meat is examined by a local inspector. These

examinations do not include microscopic testing for trichinosis and therefore there is little protection against this disease by meat inspection in this country. Where pork products are prepared for consumption without the need of further cooking, the inspectors see that the required amount of processing is carried out so that all the parasites will be killed.

A second method of control has been the requirement that all garbage which is fed to hogs be cooked. This method is used in Canada, England and also in the state of Kentucky, Oregon, and New York. However, it has been found that this method presents many difficulties.

A third method of control has been attempted in recent years. This is the freezing of raw pork. It has been found that trichinous meat, in sections of six inches or less, can be rendered non-infective by refrigeration at a temperature of 5° F. for twenty days, at ten degrees below zero for ten days, or at twenty degrees below zero for six days. Lower temperatures will likewise kill the parasites in a shorter period of time. It has recently been suggested that all pork be subjected to this freezing process before it can be sold. This would tend to decrease the incidence of trichinosis and the disease may even be eliminated.

#### **Protection Against Trichinosis in the Home**

The easiest and safest method of preventing trichinosis is by the thorough cooking of pork and pork products used in the home. Pork roasts should be thoroughly cooked thirty minutes for every pound and the housewife should be sure that the center of the roast has lost its original pink color and has turned gray. Sausages or sausage meat should be sufficiently cooked so that the meat is well done.

As it is now possible to obtain deep-freeze cabinets, which have temperatures varying between zero to 50° F., by using these cabinets freezing conditions can be obtained so that the meat will be freed of live parasites, if present, in the pork that is slaughtered by families for home use."

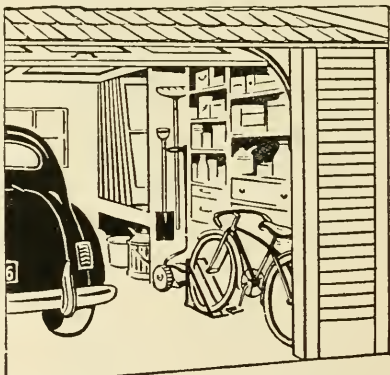
# BUILD IN SAFETY!

Are you living in a blueprint whirl these days? If you're planning to build your dream house or lift the face of the old homestead, you will be interested in the new building standards developed by the National Safety Council and a committee of technical experts. Some of the recommendations of the committee are explained and illustrated below. For further information write your local or state safety council.



Plan plenty of storage space! Be sure to have a centrally located housekeeping closet on your list of "musts". Specific space should be planned for storing vacuum cleaner, cleaning products, and housecleaning equipment. At the top, have a lock compartment for storing household poisons. More than 500 children under five years of age die annually from home poisonings.

For outdoor storage, have your garage designed four feet wider or longer. This additional space will allow room for storing storm windows or screens, gardening equipment, tools and outdoor play equipment. Make provision for storing garden insecticides in a lock compartment which children cannot reach. Plan driveway with no blind corners created by buildings or shrubs.



Ever bump or jab your head on kitchen cabinet doors? The sliding type door will eliminate this hazard. They can be built-in to slide either vertically or horizontally. Rounded corners on all counter spaces will get rid of the hazards of sharp edges. Specify plenty of electrical outlets for labor-saving devices, and extra lighting over all work counters.





# The Health Bulletin

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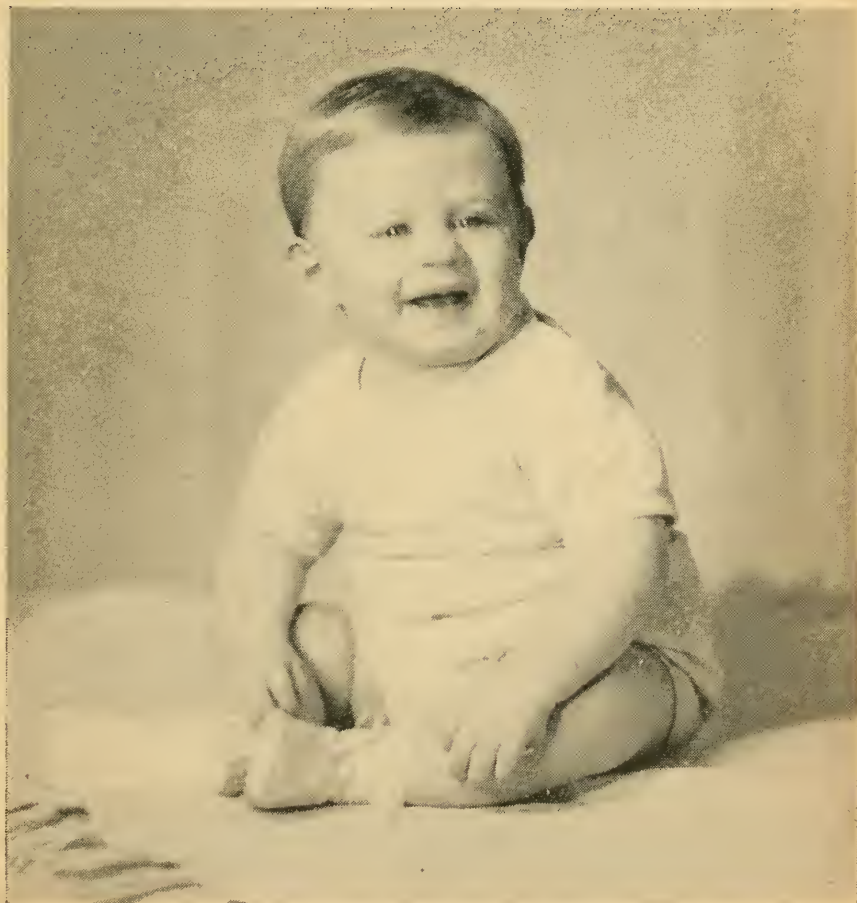
This Bulletin will be sent free to any citizen of the State upon request.

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No. 5



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Chickenpox	Influenza	Tuberculosis
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Breast Feeding.	15 to 24 months; 2 to 3 years; 3 to 6 years.
Infant Care. The Prevention of Infantile Diarrhea.	Instruction for North Carolina Midwives.
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# THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 61

MAY, 1946

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

## Food For Ourselves and For Others

*By*

CARL V. REYNOLDS, M.D., Chairman  
State Nutrition Committee

THE United States has always been a land of plenty in the eyes of the other nations of the world; and this seems to be particularly true today when the nations of Europe and Asia are trying to rebuild their farms while we in the United States are able to cultivate our soil with no problem of shell holes and devastated land.

Food production in the United States is about  $\frac{1}{2}$  higher than it was before the war. The people of this country are consuming on the average 3,400 calories per day. In Europe and Asia, the conditions are entirely different. Europe is producing less food than she did before the war. Not only malnutrition but real hunger exists among the people of many of the European and Asiatic nations. As compared with the consumption of 3,400 calories, per man per day in the United States, thousands of persons abroad are existing on 1,500 calories or less per day.

The people of the United States can help alleviate the starvation conditions of men, women and children abroad, without any detriment to their own dietaries. One way of providing food for those in foreign countries is to send wheat to them. President Truman has suggested that we can have more wheat available for export if we modify some of our milling processes and if we reduce our consumption of wheat products.

Millers have been asked to cooperate by producing a flour referred to as "Truman Flour," which will yield a higher percentage of flour for human consumption from the wheat grain. This flour is an 80% extraction flour which means that from every 100 pounds of wheat the miller will obtain 80 pounds of flour. This permits a saving of 8 pounds of flour per 100 pounds of grain, for the customary refined flour was a 72% extraction flour, or in other words, produced only 72 pounds of flour per 100 pounds of grain.

It is difficult to distinguish 80% extraction flour from the old 72% extraction flour without a careful examination. There is little change in color or flavor. It may be used in the same recipes as the higher extraction flour, but it is not recommended for use in angel or sponge cakes. The nutritive value of the 80% extraction flour, however, is higher than that of the 72% extraction flour, for more of the valuable proteins are retained at this lower extraction.

The chief objection to the new flour is it rather poor keeping qualities. This, however, need not disturb anyone. It merely means that flour should be purchased more frequently in smaller quantities and stored in a cool, dry place. This means of storage is also recommended to persons who may have



large supplies of the more highly refined white flour. This flour too, will become unfit for human consumption unless it is stored in a cool, dry space, preferably in cans.

Although the milling of 80% extraction flour will provide a larger amount of wheat for export there are many other ways of increasing the amount of wheat available. First the elimination of waste of wheat products. Too many persons are careless about bread and other flour products. There has always been such an abundance of bread in this country that little thought has been given to conserving this particular food. Trimming the crusts from bread to make sandwiches, throwing away dried bread, discarding the ends of a loaf of bread, taking a larger serving of bread than one can eat are a few examples of some of the wasteful habits that have been practiced by people in this country for many years.

Since wheat is the grain that can be shipped most easily to the countries abroad, it is obvious that each individual in the United States can make a personal contribution to the health of people in war-ravaged countries by following certain rules: (1) do not waste bread of any kind, (2) replace some of the wheat bread with cornbread, (3) use oatmeal as a cereal in place of some of the bread in the diet, (4) use dried bread in puddings, dressing and in making french toast, (5) do not trim crusts from sandwiches, (6) use open-faced sandwiches instead of closed sandwiches, (7) make open-faced pies instead of covered pies, (8) use more fresh fruits in season instead of pastries and cakes, (9) use potatoes in place of bread whenever possible. Potatoes provide many of the same

nutrients which are found in bread. Contrary to popular belief potatoes are not fattening and may serve well as a substitute for part of the bread in the diet.

The conservation of wheat products through reduction in the amount of breads, pastries, and cakes served to a family requires an increase in the amount of fruits and vegetables in the diet to replace some of the calories ordinarily supplied by bread. This in turn means a greater demand for garden produce. To meet this demand gardens will have to be cultivated as widely as they were during the war years. Surplus garden yields will need to be conserved by canning, freezing or dehydrating to provide plentiful supplies of food for use during the winter months.

Does this change in the customary food pattern mean that the people of the United States will in any way impair their own health in the effort to help the starving peoples of other countries? Not in the least! Increasing the amount of fruits and vegetables, milk and eggs too, in the diet to replace some of the foods prepared from flour cannot possible damage the health of any individual. Moreover, for many persons, the mere matter of eliminating waste will result in the saving of a considerable amount of cereal foods. It is estimated that if each person saved two slices of bread each day for four-months, 135,000 tons of wheat could be shipped abroad. It seems a small sacrifice indeed, to make for those who helped us keep the soil of the United States free of battle scars.

**ELIMINATE WASTE, CONSERVE WHEAT PRODUCTS.**

# \* Public Health Uses of DDT

By

CHARLES M. WHITE

State Director of Malaria Control

## Introductory

IN 1874 a German chemist first synthesized DDT purely as an academic activity. At that time nothing was known of its insecticidal properties. In 1939 J. R. Geigy, of Basle, Switzerland, discovered that it would kill certain insects. It was not until 1942 that it was introduced into the United States.

So much has been written about DDT in newspapers and magazines, where the purpose seems to have been to stress the sensational aspects rather than give complete and correct information, that it is feared the public has a distorted and in some cases a fantastic comprehension of its potentialities. These publications have also served to give the product more free and unsolicited advertising than has ever been accorded any article placed before the public, even prior to its availability for general use. This has created an unprecedented demand, making it very easy for unscrupulous or unqualified producers and vendors to flood the markets with inferior products containing, or claimed to contain DDT, at excessive prices.

For the last year, we have received numerous inquiries regarding the cost, method of application, and effectiveness of DDT. With so much interest manifested and the public's concept of its magic powers, it is feared that disappointments will be experienced by many people when it is found that DDT does not live up to their preconceived expectations. Its widespread use might also be curtailed by failure to achieve maximum benefits through improper application.

DDT is by far the best all-round insecticide ever developed. When properly compounded and applied, spectacular results can be obtained. It is believed

that many insects of public health significance, as well as numerous obnoxious pests, can be controlled and in some instances completely exterminated by the correct use of DDT.

For the last year the North Carolina State Board of Health has been conducting experiments with DDT which have given very gratifying results. It has been used against houseflies in milk bottling houses at dairies, in cafes, in private homes, and other places. A large house-spraying program directed against malaria mosquitoes has been conducted in areas proven to be highly malarious by blood slide surveys. All that could be desired was achieved in these experiments, as DDT proved to be sure death to flies and mosquitoes. Incidental benefits were also observed in the killing of bedbugs and roaches. Your State Board of Health wants to pass on to the public all of the information gained from these experiments, as well as reliable facts obtained from the writing of recognized authorities.

## Effects on Insects

DDT is not an immediate repellent of insects. When flies or mosquitoes light on a surface that has been sprayed with it, they appear to experience no adverse reactions whatsoever at first, but remain calm and composed for a period varying from five minutes to nearly an hour, depending on the individual susceptibility of the particular insect. After this period, a highly nervous condition sets in. The legs begin to twitch and the insect flies from one place to another in an apparent nervous frenzy. If possible, it will usually escape and be seen no more. After a period ranging from fifteen minutes to three hours, it will fall to the floor, lie on its back, wave its legs aimlessly and manifest other frenzied contortions.

Frequently after this, flight is resumed in an uncontrolled haphazard fashion. Precise tests run by us, involving the use of hundreds of flies, show that death is certain, once these symptoms set in. When properly applied to the ceilings, walls, and screens of homes, DDT has been known to kill flies and mosquitoes for as long as seven months. It can be relied on to remain entirely effective for at least three months. The slow action of DDT described above tends to make the observer think that no results are being obtained when it is used outdoors or in unscreened homes. If a large number of insects breed in the immediate proximity, new arrivals will constantly replace those that have become effected and gone off to die. The absence of dead insects also creates the impression that none are being killed. This can be attributed to their inclination to escape the place of contact. This clearly illustrates that DDT is not a substitute for screens but is a very effective aid in controlling undesirable insects. If the interior of a well-screened house be sprayed correctly, all flies and mosquitoes that enter it will be down in three hours or less and dead after ten or fifteen hours. For all practical purposes they are dead when they are rendered incapable of flight.

Even though a total absence of mosquitoes cannot be achieved in a house without screens, good malaria control can be expected. When the malaria mosquito feeds on an occupant of the home, her abdomen becomes heavily loaded. Before flying off, she will almost invariably rest awhile. If she sits on a surface that has recently been sprayed with DDT, she will die before biting another person. Thus one of the most important links in the chain of malaria transmission is broken.

There will arise a number of questions regarding the value of DDT as a killing agent for insects which molest field crops, gardens, orchards, and other objects with no public health connection. The State Board of Health is not

in a position to give information of this nature. It is suggested that your county agriculture agent be consulted.

### Materials

When first manufactured, DDT is in the form of a slightly lumpy white powder which bears a resemblance to ordinary table salt. In this form it is not suitable as an insecticide, but, is mixed with other materials. When used in the dry state, it is mixed with some inert dust, such as a cheap form of talc. Before it can be applied as a spray, it must be mixed with a material in which it will dissolve.

DDT readily dissolves in kerosene oil. In spraying for mosquitoes, flies, and other insects, the army uses a five per cent solution of DDT in kerosene. This solution is easily obtained by dissolving two pounds of powdered DDT in five gallons of kerosene. When larger or smaller quantities are desired, this same ratio is maintained. Mixing can be done by any method which will agitate the liquid thoroughly after the powder has been added, such as stirring with a paddle, rocking in a barrel, or splashing in a churn. The time required for mixing varies with the temperature and quality of the powder. The mixing should be continued until the liquid becomes clear and contains no small particles in suspension. The kerosene spray is as effective as any devised for applying DDT, yet it has the objectionable quality of being a fire hazard for a longer period than that mixed with Xylene. It sometimes leaves a greasy residue, and its odor, which soon disappears, is objectionable to some people.

Xylene is the solvent most commonly used by the U. S. Public Health Service and the N. C. State Board of Health. Xylene will absorb a much greater amount of DDT than would be used in a spray. This makes it possible to prepare concentrated solutions that can be stored in smaller containers and transported more easily. The desired volume is obtained by the addition of water. As the DDT-Xylene solution alone will not mix with water, an emulsifying



agent such as Triton X-100 must be added.

Since Xylene will dissolve more DDT at higher temperatures, a larger amount of DDT is used in the concentrates which will be sprayed during summer months. Separate formulas are used in mixing concentrates for storage at temperatures above and below 60° Fahrenheit. The basic formulas for the different concentrates are given below:

	Summer Formula	Winter Formula
DDT	3 lbs.	1 lb.
Xylene	3 qts.	2 qts.
Triton	6 fl. oz.	3.2 fl. oz.
Makes	1.03 gal	0.6 gal.

The summer concentrate contains about 35% DDT and the winter concentrate approximately 20%. Before spraying, add 6 parts of water for every part of the summer concentrate and 3 parts of water to the winter concentrate to form the spray emulsion. This makes a solution of approximately 5% DDT. Do not add the water until ready to use. The emulsion is a milky appearing liquid. When sprayed on a surface, the liquid evaporates, leaving the desired residue of DDT crystals.

The DDT can be dissolved in the Xylene by the same method described for mixing it with kerosene oil.

#### Cost of Materials

The State Board of Health has received quotations from several producers of DDT and ascertained the price which the U. S. Public Health Service pays for Xylene and Triton. The basic cost of the ingredients used in one gallon of the 5% kerosene solution is approximately 35 cents. Reports have reached us of purchases of this mixture being made in the state at prices as high as \$4.40 per gallon. The price, purchased in large quantities of the ingredients used in one gallon of the 35% concentrate, is approximately \$2.25. We have been informed by several health officers that they have received quotations running as high as \$10.00 per gallon.

Notwithstanding the fact that the producer and vendor are entitled to reasonable profit, these prices are exorbitant. If the basic ingredients be purchased and mixed by the user until the retail prices come down to a reasonable level, much money could be saved.

Shortly after government restrictions were removed from the sale of DDT, we wrote twenty manufacturers of the product, asking that they inform us of the price and availability. Six companies stated that it could be supplied immediately. The remainder informed us that their entire output had been contracted for. Recently we again wrote the companies, who manifested a willingness to supply us with DDT, and were advised that they are now prepared to fill orders immediately. Listed below are these companies, as well as the manufacturers of Xylene and Triton, from whom the U. S. Public Health Service purchases their supply.

#### Manufacturers of DDT

J. T. Baker Chemical Company  
General Offices and Plant  
Phillipsburg, New Jersey  
R. W. Greef & Company, Inc.  
10 Rockefeller Plaza  
New York 20, N. Y.  
Marietta-Harmon Chemicals, Inc.  
Marietta, Ohio  
Merck & Company, Inc.  
Rahway, New Jersey  
The Sherwin-Williams Company  
1800 Guild Hall Building  
Cleveland 1, Ohio  
Westvaco Chlorine Products Corp.  
Woodside Building  
Greenville, S. C.

#### Manufacturers of Xylene

R. R. Elk and Company, Inc.  
Garfield, New Jersey  
Alabama By-Products Corporation  
P. O. Box 354  
Birmingham, Ala.

#### Manufacturers of Triton

Rohm and Haas  
Washington Square  
Philadelphia, Pa.

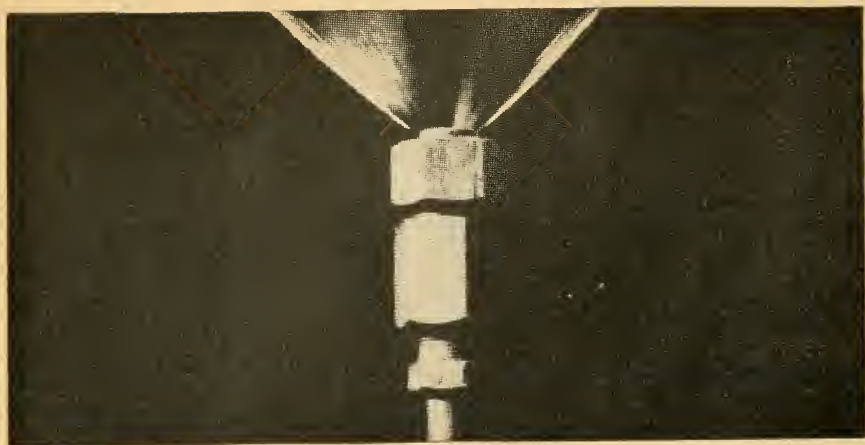


Figure 1

A Fan-Shaped Spray Acts Like a Brush in Applying DDT

### Equipment

Many types of spraying equipment have been tried for applying DDT. Any good garden or crop sprayer is entirely satisfactory, provided it be equipped with a nozzle which throws a fan-shaped spray. The cylindrical sprayers used by most tobacco and vegetable farmers are suitable, provided they are equipped with the right nozzles. The only nozzle we have been able to locate which conforms with this requirement is the Type  $\frac{1}{4}$  T8002 which is sold by Spraying Systems Co., of 4021 West Lake St., Chicago 24, Illinois, at \$1.80 each. With a nozzle of this type the spray can be applied to any desired surface with the greatest of ease and rapidity. (Fig 1).

### Spraying

In spraying, the nozzle should be held about 18 inches from the surface and moved at a rate which enables approximately 190 square feet per minute to be covered. Before the actual spraying is tried, it is recommended that the person who is to do the spraying practice on a marked-off surface, using water rather than the emulsion. He will soon be able to spray at a rate which will automatically give the cor-

rect coverage. (Fig. 2). If the nozzle is held too far away from the wall, drops form with dry spots left between them. If it is held too close, too much liquid will accumulate and some will run off and make streaks on the wall.

The following is recommended by the United States Public Health Service before spraying a home with DDT:

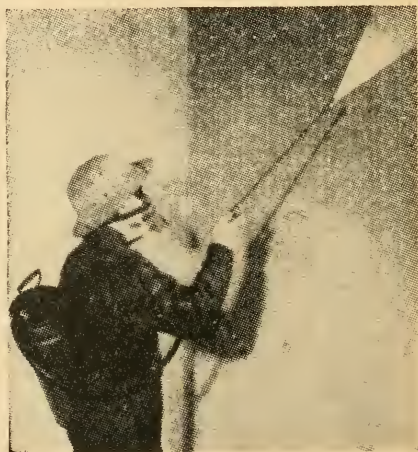


Figure 2  
Spraying

- (1) Put out all fires. (Fig. 3).
- (2) Cover all varnished furniture in the center of the room. (Fig. 4).
- (3) Take all pictures and mirrors off walls.
- (4) Remove clothes from closets and walls.
- (5) Take outdoors or cover dishes, pots, pans, eating utensils, and food. (Fig. 5).



Figure 3  
Put Out All Fires

- (6) Cover varnished floors with newspapers. (Fig. 6).
- (7) Pull down shades to prevent spotting of window glass.
- (8) Test spray nozzle OUTSIDE before beginning to spray in the house.

In spraying for mosquitoes, a good application of either the DDT-Xylene



Figure 5  
Take Dishes and Other Food Receptacles  
Outside or Cover Them Up



Figure 4  
Cover Dark Furniture



Figure 6  
Cover Varnished Floors



emulsion or the 5% kerosene solution should be sprayed on the walls and ceiling of each room in the house, as well as the porches. The screens should also be sprayed or painted with one of these mixtures. When applied correctly, the spray does not harm wallpaper nor painted surfaces, but will show slightly on dark or varnished surfaces after it dries. It can be removed with ordinary furniture polish. Walls, curtains, wallpaper, or furniture are not injured. Screen doors should be given heavy applications, as large numbers of mosquitoes rest on the outside, awaiting the opening of the door to enter the house.

For houseflies, cockroaches, bedbugs, and fleas, the U. S. Public Health Service makes the following recommendations:

#### **Houseflies**

In addition to killing mosquitoes, DDT on walls and ceilings will also cut down the fly population, especially if the kitchen and pantry are carefully sprayed. Spray the window and door screens and the sides of the house around front and back entrances, especially the back porch and the kitchen entrance. Spray around garbage cans and in privies. Spraying barns and stables reduces the fly population tremendously.

#### **Cockroaches**

Since cockroaches are most active at night and hide during the day in sheltered darkened places, DDT must be carefully applied and forced into cracks and crevices where these insects are usually found. Treating the walls, ceilings, and floors of kitchens and pantries will help, but concentrate the spray in cracks in and around cupboards, sinks, plumbing, etc. Spray the legs and undersides of the tables and chairs and other places where food is handled and stored, or where food particles may accumulate. DO NOT spray food or dishes.

#### **Bedbugs**

Bedbugs hide in cracks and crevices during the day and come out at night

to suck blood. Hence, DDT spray must be directed toward their daytime hiding places. Apply the DDT spray to the bedsteads, paying particular attention to cracks in the wood and joints. Spray the springs and mattresses. Strip the mattress, and spray all sides and the edges, especially any crevices in which bedbugs might hide and behind any loose paper where they might congregate.

#### **Fleas**

While adult fleas are commonly found on pet dogs and cats in houses and often attack man, the immature stages do not occur on these hosts. Eggs drop off the animals onto the floor, and the larvae develop in the dust and debris in cracks, corners, under rugs, and on the mats where the dog or cat sleeps or is accustomed to lie down. For flea control, spray the floors and rugs of all rooms in the house, especially the basement if one is present, and give special attention to possible breeding places. DO NOT spray the animals themselves, since DDT in oil solution may be absorbed and kill the animals. Do treat kennels, sleeping baskets, mats, or wherever these pets usually lie down.

#### **Care of Equipment**

After the spraying is finished, or at the end of each day's work, the following recommendation of the U. S. Public Health Service should be followed in cleaning can and nozzle:

- (1) Remove cap, tip, and strainer from body of nozzle and soak them in Xylene or kerosene.
- (2) Empty any remaining spray solution into a container for use the next day. DO NOT put it into a can with concentrate since it is not the same strength.
- (3) Fill tank half full of water, slosh around, and empty by turning upside down.
- (4) Refill tank one-quarter full of CLEAN water and spray out through the hose and gun.
- (5) Wash outside of sprayer carefully, especially the hose and trigger.

- (6) Finish cleaning the nozzle parts as follows:

(a) Inspect the tip carefully. If necessary, remove foreign matter by using a fine brush. NEVER clean the tip with a wire or knife blade as this part is carefully machined and any scratches might change the spray pattern.

(b) Remove screen from strainer and clean by sloshing in Xylene or kerosene.

(c) Reassemble nozzle, being sure to tighten the cap carefully but securely.

### Precautions

While DDT is deadly to many insects, it is not harmful to man, if properly used. Large doses, such as a teaspoonful, taken by mouth or frequent exposures to excessive DDT oil solution on the skin would probably cause toxic reactions. As with all insecticides, certain precautions should be taken to avoid possible ill effects. The U. S. Public Health Service recommends the following precautions:

- (1) Mix concentrate OUTDOORS whenever possible.
- (2) Wear neoprene GLOVES while handling DDT, Xylene, and concentrate.
- (3) AVOID SPILLING concentrate on clothing or skin.
- (4) CHANGE clothes immediately if they become soaked with concentrate and WASH any skin in contact with soaked clothing.
- (5) Use a GREASELESS skin lotion to prevent chap from Xylene exposure.
- (6) While spraying, wear PROPER CLOTHING, a wide-brimmed hat, and gloves to avoid as much skin exposure as possible. WIPE face frequently with clean cloth and avoid rubbing spray into eyes and WASH hands frequently in soapy water.
- (7) Take a good soapy BATH and change clothes after each day's work.
- (8) Change clothes IMMEDIATELY

if they become soaked with spray. WASH affected body parts.

- (9) DO NOT SPRAY baby beds, children's toys, high chairs, food dishes, silverware, or rooms occupied by sick persons.
- (10) BE SURE ALL FIRES ARE PUT OUT.

### Summary

#### DDT Kills:

Mosquitoes, house flies, fleas, bedbugs, most cockroaches, and certain other undesirable insects.

#### Equipment

Any good garden or crop pressure sprayer equipped with fan-spray nozzle. Nozzle may be purchased from:

Spraying Systems Company

4021 West Lake Street

Chicago 24, Illinois

Type  $\frac{1}{4}$  T8002, Price \$1.80 each

#### Materials:

##### For Emulsion Spray

DDT, Xylene, Triton, and Water  
Concentrated Mix

	Summer	Winter
DDT	3 lbs.	1 lb.
Xylene	3 qts.	2 qts.
Triton	6 fl. oz.	3.2 fl. oz.

Makes	1.03 gal.	0.6 gal.
Approximate cost of ingredients	\$2.25	\$1.00

Add 6 parts of water to summer concentrate and 3 parts of water to winter concentrate to form spray emulsion. This makes approximately a 5% solution. Do not add water until ready to use.

##### For 5% Kerosene Spray

Mix 2 pounds of DDT powder with 5 gallons of kerosene.

Ingredients should cost about 35 cents per gallon.

DO NOT PURCHASE DDT MIXTURES NOR SOLUTIONS UNLESS THE PERCENT OF DDT IS SHOWN ON THE CONTAINER.

\*All illustrations shown in this article were taken from United States Public Health Service Publications with their permission.

At the request of a number of people this article, which was published in the October, 1945, issue of the Health Bulletin, is being presented again. A few minor revisions have been made in order to bring the material up to date. In the October issue it was recommend-

ed that a 3% DDT Xylene emulsion spray be used. Since DDT is more plentiful, it will be noted that we recommend that the concentration be increased to 5%, as it has been found that this percentage gives a longer residual effect.

## Some Practical Aspects of Rural Medical Practice

*By*

B. B. McGUIRE, M.D., District Health Director  
Avery - Mitchell - Yancey District H.D.

IN view of the many medical and hospital bills now before Congress, it appears that the views of country medical practitioners have not so far been advanced, and since the writer has spent twenty years in purely rural practice in West Virginia and North Carolina, some points I can make might need some additional thought.

Recently in a large University the senior medical class was questioned as to how many of the fifty would practice in the Country—not one. How many in a Town of 5000 or less—only two or three. One reason advanced was that these boys were afraid of their diagnostic ability in rural practice without access to modern laboratory, X-ray, and other facilities to which they have been accustomed in college. Another point was that they would be on duty twenty-four hours every day in the year, and furthermore, country people on the whole object to or are unable to pay fees equal to those paid in the cities whose citizens pay them without blinking an eye, although the service rendered may be as efficient as that rendered by the city practitioner. The third and all important reason is that the boys in the city would or could have hours, and could have the judgment of other practitioners as moral support in diagnosis and treatment. They could get much higher

prices for their work and have the benefit of modern diagnostic facilities at hand.

It is most certain that it takes rare judgment to arrive at definite and correct diagnosis without modern diagnostic facilities and we have all made mistakes in this regard. Possibly the common horse sense judgment that the older practitioners developed so well is still too much neglected by the younger men. Even with the modern tests used in their full glory, we must still display some judgment to know what is wrong and what should be done for the patient.

What can be done to extend and improve medical service to our rural people? In my judgment the best method is to build in each County or in a strategically located Town in a two or three County area, a Health Center to house the Health Department, and large enough for maternity cases, tonsil, and other minor work and medical cases. I think that every doctor practicing in the area should have an office in this building as well as dentists and a pharmacy. A laboratory technician working in a small, well-equipped laboratory, X-ray service, and other diagnostic facilities should be provided. The doctors should divide the practice, each doing certain phases, and they should make very few calls



in the country. Practically every patient can come to the hospital more quickly after an accident than the doctor can go to them, and in the hospital or Health Center the doctor has most everything to work with as contrasted with few that he can take along. Even in the Health Center the laboratory, X-ray, etc., will enable the doctor to really find out what is wrong and what should be done. This feature is still more effective when one is ill from any cause than it is in the case of an accident. There is seldom harm in moving an accident or illness. Most important of all is the fact that the patient's time is far less valuable than the doctor's. While the doctor will be hours making a call to see one patient, he can, in the hospital or Health Center, give far better service to a dozen.

When the doctor makes a call a long distance away he frequently can not be certain what is wrong. He must often say, "it appears definitely to be so-and-so, but in order to be certain, laboratory, X-ray, or other facilities must be used. These are in the Health Center, so my advice is to bring the patient in." Why not bring him in at first, save the doctor's time in traveling, and above all, be more certain to save the patient. As mentioned above, in the Health Center, let each doctor treat certain diseases—a General Surgeon, an Eye, Ear, Nose, and Throat man, an Internist, Obstetrician, etc, or in cases where only three or four doctors are available, let them divide the practice as decided by them. Personally I believe that every doctor has special qualifications by nature to do certain things better. After determining

his learnings, let him take a few days or weeks refresher course at intervals. After many years practice, I finally decided that I am a firm believer in prevention — hence I am in Public Health.

After specializing in the clinic, even though it be local, he will become far more efficient, and will get along better with the other Doctors. Each Doctor will be benefited further by association with the other Doctors and by seeing more patients suffering from the branch of medicine that he is treating and by the refresher courses.

#### AS TO THE PATIENT'S SELECTION OF HIS OWN DOCTOR:

Let the patient see the Internist if he knows him better and prefers him. If it is acute appendicitis, all the Internist will have to do is say: "Bill, Dr. Smith is a real surgeon, a fine fellow and how about letting him see Agnes. He knows more about her than I do."

Then Doctor Smith will suggest the Internist if a person preferring him has pneumonia.

When the Health Center gets a patient needing further service, let a history be made and send the patient to the large District Hospital and later to the larger Medical Center if needed.

I see no reason why extended health insurance supplemented by the funds the patient may have, should not, in combination bear the expense of operation of all Health Centers, regional and Medical Center hospital service. For those supported by the Welfare Department bills can be paid from that source.

## Notes and Comment

**OUR FRONT COVER**—Lynn Gray Maddry, Jr., should hold a special spot in the affection of all persons interested in public health in North Carolina. His father has long been a member of the staff of the State Laboratory of Hygiene and by his energy, intelligence and devotion to duty has had increasing responsibilities placed upon his shoulders. His mother, who prior to her marriage was Miss Ethelene Stevens, as a chemist, assisted in the Nutrition Survey in which the laboratory participated during the early '40s.

Lynn Gray, Jr. has been brought up under the supervision of a competent pediatrician in conformity with best public health practices. He is a good specimen.

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**INFANT AND MATERNAL MORTALITY** — Since May is Child Health Month, the Health Bulletin has for the past several years published in each May issue statistical data which should interest all students of public health problems. On page 15 you will find a table giving the number of live births, the infant mortality and maternal mortality for the United States for the year, 1944. On page 16 of this issue we find comparable data for each of the counties in the State of North Carolina. These are essentially the auditors' report. However, since most of us are more familiar with the report cards which are brought home by our children than we are with financial statements, we will deal with the tables more nearly in the terms we would use in commenting upon record cards. In scanning the information contained on page 15 we find that North Carolina is neither the best nor the worst. Our birth rate is still above the average for the United States. There was a time when some of us boasted about our high birth rate. To others this has seemed to be a questionable accomplishment.

We are making rapid progress in lowering our infant mortality rate. A few years ago we were thankful that one or two others had higher infant mortality rates than we had. In 1943 there were eleven states which had higher rates than North Carolina. This year there are fifteen states that have higher rates than we. These are: Alabama, Arizona, Colorado, Delaware, Florida, Kentucky, Louisiana, Maine, Nevada, New Mexico, South Carolina, Tennessee, Texas, Virginia and West Virginia. Although our progress is gratifying, we should not take too much pride in it because someone is likely to call our attention to the fact that the mortality for the nation as a whole is 39 per thousand live births; whereas, North Carolina has a rate of 45.4.

When our maternal mortality study was made during the years 1932-1936 the average rate for the five year period was 7.1. The rate for 1945 was 2.7. This is indeed progress. That it is genuine progress is revealed in the following table which shows a reduction of infant mortality for each of the past five years.

	Birth Rate	Infant Mortality	Maternal Mortality
1941	23.7	59.8	4.0
1942	25.2	49.2	3.4
1943	28.1	46.7	3.2
1944	24.9	45.4	3.0
1945	23.4	44.7	2.7

For the year 1944 the national maternal mortality rate was 2.3. For this year only the following states, Alabama, Florida, Georgia, Louisiana, Mississippi, New Mexico and South Carolina had higher maternal mortality rates than North Carolina. If you count these states, you will find that there are seven of them. This is an improvement over our standing in 1943 when only six states had higher maternal rates than North Carolina.

# LIVE BIRTHS, INFANT MORTALITY AND MATERNAL MORTALITY UNITED STATES, 1944

STATE	Live Births		Infant Mortality (Death in the 1st Year of Life)		Maternal Mortality	
	Number	Rate Per Thousand Population	Number	Rate Per Thousand Live Births	Number	Rate Per Thousand Live Births
United States.....	2,794,800	20.8	111,127	39.7	6,369	2.3
Alabama.....	74,415	25.7	3,389	45.5	278	3.7
Arizona.....	14,225	20.2	979	68.8	42	3.0
Arkansas.....	41,240	22.0	1,433	34.7	114	2.8
California.....	179,123	21.1	6,177	34.4	304	1.7
Colorado.....	23,931	20.5	1,183	49.4	59	2.5
Connecticut.....	34,278	19.2	1,054	30.7	52	1.5
Delaware.....	5,993	21.3	292	48.7	9	1.5
District of Columbia.....	15,758	17.7	706	44.8	33	2.1
Florida.....	48,418	20.4	2,202	45.5	161	3.3
Georgia.....	76,540	23.7	3,407	44.5	279	3.6
Idaho.....	12,241	24.6	416	33.9	30	2.5
Illinois.....	142,005	18.5	4,602	32.4	254	1.8
Indiana.....	71,354	21.0	2,462	34.5	141	2.0
Iowa.....	46,564	20.0	1,540	33.0	83	1.8
Kansas.....	34,976	19.6	1,163	33.2	64	1.8
Kentucky.....	64,225	23.4	2,997	46.6	159	2.5
Louisiana.....	61,050	23.8	2,824	46.2	207	3.4
Maine.....	17,762	21.7	829	46.6	40	2.3
Maryland.....	43,915	20.9	1,821	41.4	82	1.9
Massachusetts.....	78,209	18.3	2,585	33.0	140	1.8
Michigan.....	114,700	21.1	4,343	37.9	193	1.7
Minnesota.....	56,113	21.7	1,756	31.2	77	1.4
Mississippi.....	56,940	25.5	2,513	44.1	219	3.8
Missouri.....	67,990	18.1	2,558	37.6	152	2.2
Montana.....	10,943	22.6	395	36.1	16	1.5
Nebraska.....	24,575	20.0	819	33.0	43	1.7
Nevada.....	3,028	21.1	152	50.2	7	2.3
New Hampshire.....	8,548	18.5	322	37.7	24	2.8
New Jersey.....	76,265	18.0	2,593	34.0	120	1.6
New Mexico.....	15,585	29.1	1,389	89.1	62	4.0
New York.....	229,534	17.8	7,535	32.8	425	1.9
North Carolina.....	90,629	24.9	4,115	45.4	266	3.0
North Dakota.....	13,530	24.9	479	35.4	24	1.8
Ohio.....	133,598	19.4	5,147	38.5	257	1.9
Oklahoma.....	46,725	21.5	1,923	41.1	111	2.4
Oregon.....	24,150	19.5	736	30.5	43	1.8
Pennsylvania.....	178,370	18.8	7,136	40.0	454	2.5
Rhode Island.....	13,754	18.3	486	35.3	25	1.8
South Carolina.....	51,467	26.4	2,828	54.9	193	3.8
South Dakota.....	12,769	22.1	445	34.8	23	1.8
Tennessee.....	68,272	23.0	3,106	45.5	191	2.8
Texas.....	165,900	23.7	8,354	50.4	422	2.5
Utah.....	16,180	25.5	548	33.9	22	1.4
Vermont.....	6,824	20.8	277	40.6	13	1.9
Virginia.....	69,175	22.4	3,261	47.1	183	2.6
Washington.....	44,528	21.8	1,506	33.8	70	1.6
West Virginia.....	41,304	23.5	2,149	52.0	89	2.2
Wisconsin.....	61,547	20.4	1,972	32.0	109	1.8
Wyoming.....	5,635	22.1	232	41.2	5	0.9



# TOTAL NUMBER OF BIRTHS AND DEATHS UNDER ONE YEAR OF AGE (EXCLUSIVE OF STILLBIRTHS) ALSO MATERNAL DEATHS IN EACH COUNTY, WITH RATE PER THOUSAND LIVE BIRTHS, 1945

COUNTY	Infant Mortality Place of Death		Maternal Mortality Place of Death		Total Births By Place of Birth	COUNTY	Infant Mortality Place of Death		Maternal Mortality Place of Death		Total Births By Place of Birth
	No.	Rate	No.	Rate	No.		No.	Rate	No.	Rate	No.
Entire State.....	3,779	44.7	231	2.7	84,417	Johnston.....	34	27.5	1	0.8	1,232
Alamance.....	33	26.9	.....	.....	1,223	Jones.....	12	59.4	.....	.....	202
Alexander.....	12	64.5	.....	.....	186	Lee.....	24	37.0	3	4.6	648
Alleghany.....	2	30.3	.....	.....	66	Lenoir.....	63	45.3	7	5.0	1,390
Anson.....	29	40.3	4	5.5	719	Lincoln.....	26	50.1	2	3.8	518
Ashc.....	15	36.1	.....	.....	415	McDowell.....	15	31.5	1	2.1	476
Avery.....	15	33.2	1	2.2	451	Macon.....	11	29.1	.....	.....	378
Beaufort.....	67	65.8	4	3.9	1,017	Madison.....	15	53.0	2	7.0	283
Bertie.....	33	45.8	2	2.7	719	Martin.....	37	56.3	1	1.5	657
Bladen.....	27	40.9	.....	.....	660	Mecklenburg.....	211	52.2	11	2.7	4,042
Brunswick.....	17	50.2	1	2.9	338	Mitchell.....	7	16.8	.....	.....	415
Buncombe.....	91	37.0	4	1.6	2,456	Montgomery.....	10	30.0	.....	.....	333
Burke.....	15	19.0	.....	.....	788	Moore.....	23	35.9	1	1.5	640
Cabarrus.....	50	40.7	1	0.8	1,228	Nash.....	109	67.1	4	2.4	1,623
Caldwell.....	44	42.2	1	0.9	1,042	New Hanover.....	150	62.3	10	4.1	2,406
Camden.....	5	58.8	.....	.....	85	Northampton.....	26	51.2	.....	.....	507
Carteret.....	13	24.1	.....	.....	538	Onslow.....	42	29.9	2	1.4	1,402
Caswell.....	11	32.7	.....	.....	336	Orange.....	6	37.0	.....	.....	162
Catawba.....	42	33.6	2	1.6	1,247	Pamlico.....	11	53.9	.....	.....	204
Chatham.....	13	29.2	.....	.....	444	Pasquotank.....	39	52.7	3	4.0	740
Cherokee.....	26	47.6	.....	.....	546	Pender.....	17	51.8	.....	.....	328
Chowan.....	8	32.3	.....	.....	247	Perquimans.....	5	28.4	1	5.6	176
Clay.....	4	78.4	.....	.....	51	Person.....	13	22.1	.....	.....	586
Cleveland.....	52	34.7	.....	.....	1,495	Pitt.....	63	49.7	7	5.5	1,266
Columbus.....	60	51.1	2	1.7	1,173	Polk.....	13	51.3	.....	.....	253
Craven.....	49	58.8	1	1.2	832	Randolph.....	24	25.6	3	3.2	935
Cumberland.....	96	51.0	7	3.7	1,879	Richmond.....	47	54.9	3	3.5	855
Currituck.....	4	44.9	.....	.....	89	Robeson.....	130	52.3	13	5.2	2,482
Dare.....	8	126.9	.....	.....	63	Rockingham.....	45	38.5	1	0.8	1,166
Davidson.....	40	41.4	2	2.0	965	Rowan.....	37	33.9	1	0.9	1,089
Davie.....	10	59.8	.....	.....	167	Rutherford.....	29	32.3	2	2.2	897
Duplin.....	26	36.3	.....	.....	715	Sampson.....	40	36.7	2	1.8	1,089
Durham.....	116	43.9	22	8.3	2,638	Scotland.....	37	56.7	2	3.0	652
Edgecombe.....	60	47.6	6	4.7	1,258	Stanly.....	30	38.2	5	6.3	784
Forsyth.....	123	45.0	8	2.9	2,730	Stokes.....	16	52.9	.....	.....	302
Franklin.....	26	52.2	1	2.0	498	Surry.....	51	40.1	5	3.9	1,270
Gaston.....	101	67.6	4	2.6	1,494	Swain.....	5	18.9	.....	.....	264
Gates.....	13	68.0	.....	.....	191	Transylvania.....	10	33.7	.....	.....	296
Graham.....	6	34.0	.....	.....	176	Tyrrell.....	7	36.4	.....	.....	192
Granville.....	32	45.9	2	2.8	696	Union.....	41	41.2	8	8.0	995
Greene.....	6	15.7	1	2.6	380	Vance.....	39	54.0	4	5.5	722
Guilford.....	142	39.1	13	3.5	3,626	Wake.....	131	52.2	9	3.5	2,509
Halifax.....	58	38.0	4	2.6	1,525	Warren.....	32	57.1	.....	.....	560
Harnett.....	39	32.0	3	2.4	1,218	Washington.....	12	56.3	1	4.6	213
Haywood.....	27	31.0	.....	.....	869	Watauga.....	9	25.8	1	2.8	348
Henderson.....	27	47.8	1	1.7	564	Wayne.....	56	65.3	3	3.5	857
Hertford.....	17	53.7	3	9.4	316	Wilkes.....	49	57.7	1	1.1	848
Hoke.....	18	54.0	.....	.....	333	Wilson.....	92	60.7	6	3.9	1,515
Hyde.....	2	27.0	.....	.....	74	Yadkin.....	4	34.1	1	8.5	117
Iredell.....	65	52.3	2	1.6	1,241	Yancey.....	12	48.0	.....	.....	250
Jackson.....	17	50.5	2	5.9	336						



The

# Health Bulletin

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JUNE, 1946

No. 6



CARL V. REYNOLDS, M. D.

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### FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils  
 Appendicitis  
 Cancer  
 Constipation  
 Chickenpox  
 Diabetes  
 Diphtheria  
 Don't Spit Placards  
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 Water Supplies  
 Whooping Cough

### SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.  
 Prenatal Letters (series of nine monthly letters.)  
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 Breast Feeding.  
 Infant Care. The Prevention of Infantile Diarrhea.  
 Table of Heights and Weights.

Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.  
 Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.  
 Instruction for North Carolina Midwives.

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# THE Health Bulletin

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

## Annual Report North Carolina State Board of Health

### To Conjoint Session State Medical Society

CARL V. REYNOLDS, M. D.  
*Secretary and State Health Officer*

Pinehurst, North Carolina  
May 3, 1946

IT is deemed wise, and of importance, to inform you, in this report covering twenty months, of the many progressive additions in the Board of Health's armament for the prevention and control, as well as the rehabilitation and cure, of diseases. We have at this time, twelve divisions and bureaus, namely:—Central Administration, Preventive Medicine, Local Health Administration, Epidemiology and Vital Statistics, Laboratory of Hygiene, Sanitary Engineering, Oral Hygiene, Industrial Hygiene, School-Health Coordinating Service, Nutrition, Tuberculosis and Venereal Disease Education Institute.

The nation's citizenry is keenly interested, and has given thought, coupled with action, in ascertaining, by accurate surveys, the factual data. And, again I say to you, that the influential are determined to make available adequate medical, surgical, obstetrical and hospital care,—certainly for the underprivileged citizens—regardless of race, creed or color. Federal, state and local

governments realize that health is the basic element of human happiness, and upon its efficiency rests its economic welfare; and, in consequence, have reached a decision that health should be a part of our governmental structure, as are education, good roads and law-enforcement.

Health is the first essential to moral, mental and physical development. Its efficiency plays a distinct part in promoting education, decreasing accidents on the highways, and in the lessening of delinquency which breeds crime. Sickness leads to poverty, poverty to more sickness, and more sickness to crime,—a vicious circle!

We, as medical men, are fully aware of how unevenly medical services are distributed in the rural areas, and how small communities lack not only special but general services; and it is recognized by the laity, and should be by the profession, that new methods should be evolved, to bring about a better distribution of facilities designed to induce more and better medical

care. The crying need is for more and better distribution of doctors, hospitals and insurance.

It seems to me that a **MUST** presents itself here. We should get behind Senate Bill 191, and behind an adequate legislative appropriation. Public funds could be spent to no better advantage than for hospitals, with supplemental funds for services rendered.

Handicapped by the inability to secure adequate professional or lay personnel to accomplish what could have been accomplished, it is indeed praiseworthy, and here I give special recognition to the division directors and associates on the State level, and to health officers and associates on the local level, to the advice and counsel of the U. S. Public Health Service, and the Childrens Bureau, for the grand services rendered.

In this report, each division director could only highlight his activities; and in this foreword a detailed report is still further curtailed in conservation of time, with the hope that you will inform yourselves of the entire, though brief report, later and at your leisure.

**Division of Preventive Medicine.** In this division is lodged the administration of the Emergency Maternity and Infant Care program, which is a service, as you know, for the wives and babies of the service men in the four lower pay grades which embraces 90% of the service men. To inform you of the magnitude of this program "one out of every six babies born in the State have had arrangements made with doctor and hospital and all bills paid by this service." More than a thousand doctors and all but four hospitals participated in the program. To indicate the benefits of such a program, the maternal death rate has been reduced to a new low level in North Carolina to 2.5 deaths per thousand live births, as compared with 8.4 as late as 1930 and 5.3 in 1940, to say nothing of the supplemental economic welfare of the physicians and hospitals, to the extent of over two million dollars.

**Local Health Administration.** It is unnecessary to remind you that there are one hundred counties within the State of North Carolina, but it is interesting to report that ninety-three of these counties now have full-time local health services, and three others are anxious to secure a "place in the sun." The war has left public health work seriously crippled for want of public health workers, especially doctors and nurses. At present, we have vacancies for twenty-three physicians in the local health departments (and five on the State Staff, or a total of twenty-eight). Out of a total of 360 nursing positions in local health units, there are, at present, sixty vacancies, where no nurse at all is on duty, and seventy-five nurses fill positions temporarily under War Emergency classification, making a total of 135 Public Health Nurses needed to fill all positions with qualified personnel. The number of the vacancies for physicians has been accentuated by the withdrawal by Public Health Service personnel assigned to the State during the war period.

**Venereal Disease.** Since the last report, drastic changes have taken place in the venereal disease program in North Carolina. The active monthly clinic population has decreased from around 25,000 patients to about 8,000 patients. This reduction has been effected by the intensive treatment of syphilis at rapid treatment centers. Since April 1, 1944, a total of 13,674 patients have been admitted to the rapid treatment centers at Charlotte and Durham. At the present time, the admission rate for both centers is in the neighborhood of 800 patients a month.

In July of 1944, penicillin became available for the treatment of gonorrhea at rapid treatment centers. Shortly, thereafter, intensive treatment plans for syphilis employing penicillin were developed, thus making it possible to discard the more dangerous intensive treatment with arsenoxide.

In July of 1945, penicillin in oil and

beeswax became available for the one-injection treatment of gonorrhea, and the function of treating gonorrhea was returned to local clinics, thus making it possible to concentrate the efforts of the two rapid treatment centers on the treatment of syphilis.

Our investigation shows that there are about 25% of the syphilitic patients being treated by the medical profession outside of the public health organizations, and only 29% of the 25% of such cases treated, are reported. May we beg of you a better co-operation in the reporting of your cases and, a more intensive interest in ascertaining contacts, in order that we may advance in the eradication of syphilis?

It comes to my mind at this point, that the much neglected field in the treatment of neurosyphilis should be embarked upon. There are, at present, at least 2,731 neurosyphilitics within the State untreated, 50% of whom are potential institutional cases, while 85% of the 50%, if properly treated, could remain outside of our institutions, and occupy their places in society. This opportunity is being sorely neglected, but should have prompt attention.

In conclusion, it is reasonable to state that with the developments that have occurred in techniques of treatment, and with the available clinic and rapid treatment center facilities in North Carolina, the venereal disease program can effectively reduce the incidence of venereal diseases progressively during the coming years, provided only that adequate personnel becomes available, coupled with the united effort and tenacity of purpose of all of us who are interested and realize our responsibility toward the program, and participate in it.

**The Venereal Disease Education Institute.** We are quite fortunate in having located within North Carolina an interstate, in fact, an international program, known as the Venereal Disease Education Institute. This Institute is a co-operative project, set up in Raleigh at the beginning of the 1942-

'43 fiscal year, for "demonstration and study of public educational measures in the control of the venereal diseases." The Institute is sponsored by the U. S. Public Health Service, the North Carolina State Board of Health, and the Z. Smith Reynolds Foundation.

To give you some idea of the distribution of material by the Institute from July 1944 through December 1945, 7,517,395 graphs, placards, pamphlets, booklets, etc., were distributed throughout the United States, Canada, South America and other foreign countries. The effectiveness of this material, so widely distributed, has been recognized in some of the largest publications in the country.

**Field Epidemiological Study of Syphilis.** The epidemiological field study of syphilis in four counties within the State from January 1, 1945 through December 31, 1945, concerned itself with the accumulation of data pertinent to the measurement of prevalence of syphilis in the study area, with the measurement of the discovery rate and the attack rate of syphilis in the area. Data concerning the value of the epidemiological approach to case finding through clinical investigation of contacts of known cases is also being accumulated.

A careful analysis of data has shown that prevalence rates based on serological tests alone do not provide a reliable index of trends of syphilis in the population at large, because of uncontrollable factors of selection operating in the group tested and shifting to and maintenance of negative serologies in individuals, as a result of intensive therapy in the Rapid Treatment Centers. The method of measurement of prevalence of syphilis in the area studied has been changed to measure the accumulation of syphilitics in the area, by maintaining a complete and active case register, taking into account the additions and withdrawals of syphilitics from the community, without reference to their serological status.

The study of prevalence of syphilis



among selective service inductees has continued over a five-year period. Over this period, the prevalence of syphilis among the white inductees in this area has dropped from 13.7 to 2.3 per one thousand tested. There has been a less marked reduction in the syphilis among Negroes in this rural area, although the reduction in age has been as great as among the whites—falling from 99.3 per one thousand men inducted in 1941 to 51.9 in 1945.

It is surprising to learn that syphilis among pregnant white women has shown an increase over the four-year period of 1941-1945, from 0.7% to 1.4%. Among the Negro women it has remained constant at 7.9% over the entire period.

The importance of following up contacts is shown quite forcibly by the following statistics; 164 contacts were examined for each 100 white and Negro patients with primary or secondary syphilis interviewed. Of those examined, 73 white persons and 107 Negroes were found to have syphilis for each 100 original patients interviewed, 66.7% of them with infectious syphilis.

**Epidemiology and Vital Statistics.** In the Division of Epidemiology one of the most important activities during the latter part of 1944 was the preparation of a revision of the communicable disease regulations for consideration by the State Board of Health. The existing North Carolina list of reportable diseases, was, therefore, revised so as to select only those diseases for which a distinct control service was available to physicians and families by the State or local health departments. The proposed revision of the communicable disease regulations and the new list of reportable diseases were adopted by the State Board of Health in December 1944.

Shortly prior to the 1945 session of the State Legislature, the Division of Epidemiology prepared analyses of the whooping cough and smallpox immunization problems existing in North Carolina. This material was presented

to the Public Health Committee of the General Assembly, along with proposed bills requiring State-wide whooping cough and smallpox immunization. These bills were enacted in March 1945 and, together with the bill passed in 1939 requiring compulsory diphtheria immunization, placed North Carolina in a favorable position as compared to other states with regard to immunization laws.

May I call your particular attention to the fact that whooping cough statistics prepared by the division showed that, for all practical purposes, this disease is second only to tuberculosis as a cause of death from preventable communicable diseases.

The decrease in facilities, both public and private, available for continued emphasis on the immunization program became evident in the latter part of 1945, when the incidence of diphtheria in the State rose rapidly at the same time the disease increased in the remainder of the United States. In spite of this outbreak, definite improvement in the diphtheria situation in this State is apparent when compared to the situation as it existed in 1939, at which time North Carolina's diphtheria rate was three times the national average.

**In the Malaria Investigation and Control Unit** during the period covered by this report, this unit took 18,734 blood slides from school children on surveys conducted in malarious counties and in other areas where flare-ups of malaria occurred. The unit examined 10,213 blood slides, while an additional 5,028 were examined for us by the laboratory of the U. S. Public Health Service.

Arrangements have been made with the Soil Conservation Service to have persons proposing to build ponds first obtain a permit from us before they will participate in their planning or construction.

The U. S. Public Health Service provided the forces, equipment, and materials for an extensive DDT Residual Spraying Program in areas proven to

be malarious by positive blood smears. During the summer of 1945, slightly over 4,500 homes were sprayed with DDT. Arrangements have been made for a much larger program of this nature during 1946.

**Vital Statistics.** You will be interested to learn that the Divisions of Epidemiology and Vital Statistics have been consolidated, which increased the opportunity for supplying consolidated morbidity and mortality statistics that can be of great value in improving the efficiency of the public health program, and that will be a necessity of a more fundamental program of the medical care programs now being formulated in the State.

Early in 1945, the General Assembly adopted legislation requiring this division to provide a certified copy of the birth certificate to the parents of every child born after May 1945. Due to the fact that no funds were appropriated for this program, considerable difficulty was experienced in securing the necessary facilities; however, arrangements were finally made for the use of a photographic process and the work was scheduled to start early in 1946.

**Sanitary Engineering.** As has been noted throughout this report, the Sanitary Engineering Division, as well as the other divisions, has been seriously handicapped because of the shortage of qualified engineers and sanitarians in all fields of activity. One of the most outstanding activities that has suffered most is the milk program, the one activity which definitely retrogressed during this period. The quality of the milk distributed to the consumers during this period has been very low and numerous complaints have been received. The shortage of milk has been, and still is, acute, making it necessary to bring in milk from out-of-state sources. I am of the opinion that a State-wide law is necessary to give the State control of our milksheds and milk supplies rather than leaving the matter as it is today—a question of local option. To my mind, it is a serious

problem and a potential source of milk-borne epidemics at any time. We cannot depend upon pasteurization alone, and we should not be required to, but only use pasteurization as an added protection for Grade A milk. Just so long as our people are willing to drink Grade C milk and eat in Grade C cafes, just so long will the milk producer and distributor produce Grade C milk, and the cafes and hotels will serve Grade C food.

The control of typhus fever has been greatly expanded during the period covered by this report. The work includes the ratproofing of buildings, trapping and poisoning, and dusting with DDT to control the ecto parasites of rodents. The Public Health Service has contributed greatly to the progress of the work by making available men and materials.

The dusting program has been mainly experimental, and entomological studies are being made, as a part of this program. The results, so far, have been very encouraging, and it is hoped that these will justify the extension of this program to other counties where endemic typhus has been reported.

**Oral Hygiene.** In reviewing the summary of the corrective and educational work by our State dentists, it is exceedingly encouraging to note what has been done, notwithstanding the greatly reduced number of dentists in the field. School dentists have worked in 68 counties, and no county has received as much service as was needed, or as much as the county was willing to provide for in its budget.

Nine hundred and forty-nine schools of the State were visited by a school dentist. This means that a dentist was in each school for one or two weeks. Every child in each school had the privilege of hearing, in his or her own classroom, the dentist discuss the importance of mouth health. Every child also had the privilege of having a dental inspection by the dentist. Those whose parents were not financially able to take care of their dental needs received the necessary corrections, while

those whose families were financially able to bear the expense were referred to their dentists. Referrals were done by means of United States postal cards signed by the dentists and mailed to the parents.

Ninety-seven thousand, nine hundred and seventeen had dental inspections. The number of children receiving the necessary dental corrections was 57,936. I might mention here that the corrections consisted of amalgam and cement fillings, nitrate of silver treatments, extractions, and the cleaning of teeth for a total of 234,434 operations.

We should like to stress the importance of the educational part of the program. When the dentist goes into the classroom and talks about the value of proper dental care, his presence makes a deep and lasting impression on the children. Two thousand, two hundred and seventy-six classroom lectures were delivered and were attended by 99,408 children.

**Laboratory of Hygiene.** The Laboratory of Hygiene's activities have not been as spectacular as usual, this being due to the number of physicians having been inducted into the armed services, reducing the number of physicians available to the civilian population.

The report of the Laboratory shows that there has been distributed by the Laboratory 985,153 cc. of typhoid vaccine during the current period and 986,511 cc. during the previous twenty months. During the last five months of 1945, there were 136,450 cc. as compared with 45,810 shipped during the last five months of 1944.

Another of the biological products which is distributed free by the State Laboratory of Hygiene is smallpox vaccine, of which there was sent out an amount sufficient to protect 546,894 persons during the current period as compared with the number—492,752 during the previous period. Both typhoid and smallpox vaccines have been distributed for many years, and the demands for these products have become somewhat stabilized, which brings to my

mind, and should bring to yours, the question of whether or not we are as active as we should be in immunizing our public. This is extremely important regarding smallpox vaccination, as there has been introduced recently into this country, particularly one or two of the states in the west, a virulent type, which is causing high death rates.

We are glad to report that demand for pertussis vaccine has increased rapidly during the twenty months covered in this report. For the period ending December 31, 1945,—292,330 cc. were sold as against 188,160 for the comparable preceding period. Are we doing our whole duty toward the use of this vaccine, which to neglect is one of the major causes of deaths in children under one year?

The use of many other biological products and their distribution could be mentioned, and is of interest, so I refer you to the detailed report for full information.

With the facilities available to it, the Laboratory has endeavored to contribute as much as possible to the public health program.

**School-Health Coordinating Service.** The School-Health Coordinating Service has been in operation for the past seven years. It is a unique organization, in that it is sponsored jointly by the State Board of Health and the State Department of Public Instruction. The staff of this service has been most successful in improving the school-health programs and in coordinating the services of the local health department and the schools in the thirty-three counties in which it has worked.

The purpose of the School-Health Coordinating Service is to train teachers to do a large share of the health instruction in their daily contacts with the pupils and, in cooperation with the local health departments, to simplify and facilitate health service for the school children. To fulfill this purpose, three approaches have been utilized; (a) Pre-Service Training in Teacher Colleges, (b) Summer Conferences, and



(c) In-Service Training for teachers in the schools.

The number of screening demonstrations conducted in 123 of our white schools and 132 Negro where 985 white teachers and 421 Negro teachers participated, there were screened among the white 30,078 and Negroes 6,689, in which there were found defects in 6,800 white and 404 among the Negro.

**Nutrition.** It is impossible to give you even an outline of our nutrition program, so I will simply mention one activity, and add that the nutrition information is being disseminated on a county-wide basis by organized groups in ninety-eight of our one hundred counties. In this program the State Board of Health has two principal objectives; first, to promote a better understanding of the importance of nutrition as a factor in the maintenance of good health; second, to help establish in each community, a sense of responsibility for the nutritional status of each of its citizens. It follows, therefore, that any work carried on by the division must be based on an appreciation of the needs of the people of the State and of the resources of the State. As a consequence, the division has made an effort to use community resources outside of the Health Department, in order to avoid duplication of activities and to enhance the effectiveness of nutrition education through joint planning and work with other agencies.

During the summer the staff of the Nutrition Division and the Nutritionists with the School-Health Coordinating Service assumed responsibility for the nutrition teaching at the Health Conference for Teachers held at Woman's College and Bennett College in Greensboro and at North Carolina College for Negroes in Durham during the summer schools which lasted six weeks. A course in methods and materials in nutrition education were taken by all the teachers. In general, this included a study of the significance of nutrition; organization of a 12-year nutrition program to begin in the first grade and continue

throughout the twelve years of school; aims and objectives for teaching nutrition at the various grade levels; methods of teaching nutrition at the various grade levels.

**Industrial Hygiene.** This is a conjoint activity between the North Carolina Industrial Commission and the State Board of Health, in industrial plants, and we made examinations, clinical and X-ray, of 3,245; blood specimens for serological tests, 1,524, and 4x5 stereo-films in tuberculosis case findings program, 9,503.

The engineering staff of this division, as others, has been greatly understaffed. Demands for engineering services were of such magnitude that only plants engaged in war work and industries known to furnish the most serious occupational disease hazards, namely, silicious dust industries, received the attention deserved. There remain hundreds of other plants throughout the State that should be investigated for potential occupational disease hazards.

**Tuberculosis Control.** I am very happy to report to this body the establishment of a Bureau of Tuberculosis Control, which was organized January 1, 1945. We are just now engaged in the task of establishing what we hope will be an adequate organization on the State level for the development of the tuberculosis control program.

To give you an idea of this contemplated activity, we will have in operation six mobile units, each unit being so designed as to take films. This, too, may be delayed because of our inability to secure personnel to man them.

**Publicity.** Our publicity specialist has continued to prepare, edit and distribute news releases and to give weekly broadcasts over Station WPTF in Raleigh. This educational approach has received wide recognition.

The "NBC Transmitter" of New York, official organ of the National Broadcasting Company, in its May, 1945 issue, carried an article on the broadcasting activities of the North Carolina State

Board of Health. Also articles have been prepared for publication in "We the People," an organization of the North Carolina Citizens Association, Inc.; in "Facts," a national magazine published in New York, and other publications requesting material on the activities of the department.

In conclusion, I am going to be bold enough to call to your attention a report that I prepared and presented before the Southeastern Region Field Army American Cancer Society, in Durham, October 24, 1945, concerning cancer control, and while discussing this before you I will add that I hope you will apply what is brought out here applicable to other volunteer agencies.

"On May 22, 1913, the American Society for the Control of Cancer, was founded in New York City with George C. Clark as its first President. The objectives were: the dissemination of knowledge concerning the symptoms, diagnosis, treatment and prevention of cancer, the investigation of the condition under which cancer is found, and the compilation of statistics in regard thereto."

I am not here to discredit—or, to express it in another way—to place the grand accomplishments in disesteem, but the facts are, as to time, that it has now been thirty-two years and through the approach of education, and research mostly, we have seen the indices of cancer on the march until it has the unenviable distinction of the third place in rank of mortality and an unknown morbidity rating.

In North Carolina cancer deaths in 1930 were 47 deaths per 100,000 population. In 1944, 61 deaths in 100,000 population. In the United States cancer deaths in 1930 were 97 per 100,000 population and in 1942 there were 122 deaths per 100,000.

From the Public Health Reports, Vol. 58, we note that the case rate of cancer is three to one deaths for cancer. Illness rate 430 to 100,000 population in the states either under treatment or observation.

There are 230 new cases diagnosed each year per 100,000 population—60% in the South; 54.7% in the West; 53% in the North, first seen in study year. 5% plus reported first at death.

We must conclude from the above that there should be another and more favorable approach, and ways and means must be made available, not only to locate these cases, but for hospitalization, surgical and therapeutic means to restore the patients to health.

I would suggest the following:—

1. By joining our forces and pooling our resources, and directing our energies and available funds on the percentage basis in the field of education, resource, clinics for diagnosis and surgical and therapeutic means as indicated,—all this as a right and not as a charity.

2. We must admit our traditional attitudes in waiting for a professional call is wrong. We should anticipate the services needed rather than to await the service call.

3. A mass survey of our population as is being done in tuberculosis and venereal diseases, should be undertaken until a better method of approach has been propounded.

The National Health Council estimates that there are 20,000 volunteer health agencies of which fifteen of these volunteer agencies among this group collect fifty million dollars from the pockets of our citizens. We, as advisors to our people, should separate the chaff from the wheat. Discourage such agencies in maintaining their activities as entities; prevent overlapping of effort by pooling their resources with the organized agencies established by law to do the job. What a force for good if a correlative of all accredited agencies were formed, each retaining its identity, but all channelled for the one purpose,—the eradication of cancer, infantile paralysis, tuberculosis, etc.

We are all aware that the general body politic do not avail themselves of what medical science and research have to offer, but through an educational

program, plus the application of services indicated, we can, by establishing a greater humanitarian interest, forgetting selfishness, and with the unity of purpose, coupled with action, establish a program that will be of great benefit to our citizens and greater appeal for funds from all sources for carrying it out.

Respectfully submitted,  
Carl V. Reynolds, M.D.,  
Secretary and State  
Health Officer

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## DEPARTMENT REPORTS

### DIVISION OF PREVENTIVE MEDICINE

Dr. G. M. Cooper, Director

The entire period covered in this report has been the busiest in the history of this Division. The normal quiet activities of the Division as carried on for several years have been utterly overwhelmed with the administration of what is termed the Emergency Maternity and Infant Care program for the wives of servicemen in the armed forces of the United States who are in the four lower pay grades of the service. This classification embraces more than 90 per cent of all the servicemen engaged in the war. Since active hostilities ceased on the war fronts, the Federal government has ruled that servicemen whose wives became pregnant before their discharge are to be beneficiaries of this program. The same provision applies for the care of infants born under such circumstances. For that reason there was no decline in applications for this service between the close of the war and the cessation of active fighting on December 31, 1945.

The administration of the program has entailed an enormous amount of detailed work. In order to visualize the magnitude of the problem, it is only necessary to state that somewhere between 14 and 16 per cent of all the babies born in North Carolina during this period came under this service, meaning that this Division had to se-

cure the acceptance of a physician who would agree to care for the woman on the terms the government provided, also the admission of the patient to a recognized hospital or clinic for delivery. At the conclusion of the service, reports had to be obtained and the bills paid.

During the period, a satisfactory organization was set up inside the Division. A competent accountant was secured to head up the accounting and reporting division. Six additional assistants aided in the detail work.

More than a thousand doctors have participated in the program. Every hospital in North Carolina with four exceptions and practically all of the recognized private physicians' clinics have aided in the service to these women and their babies. Hospital managers have cooperated with the department in seeing that the service was satisfactory to all patients and physicians.

A specific report prepared by the accountant is attached. It will be noted that \$1,998,636.57 were expended in the program for eighteen months of the period. For the first quarter of the period, exact figures were not prepared and are not included with this. An estimate would run it up, if the three months of that period were added, to more than two million dollars, nearly all of it going to physicians and to hospitals. Cooperation on the part of physicians and hospitals has been satisfactory.

One of the most significant comments that can be made on this program is the fact that in 1937 only 15.5 per cent of all births of babies in North Carolina took place in any kind of a hospital. In the year 1944, 51 per cent of the total births occurred in hospitals. However, the significant emphasis in this connection is that 84.2 per cent of the women who received maternity care under this program were delivered in hospitals. It must be admitted that this is an astounding record for North Carolina. Right here there is no better place to state that for the full year 1945 the



maternal mortality rate dropped to a low of 2.5 deaths per thousand live births, and the infant mortality dropped to a new low of 43.3 per thousand live births. No other comment in connection with this program could be any more illuminating.

The accountant's report follows:

### Report of Cases Completed under the EMIC Program

For the Period July 1, 1944, through December 31, 1945

Maternity cases completed during period	14,966
Cases completed after delivery	14,613
Delivered in hospitals	12,505
Delivered in homes	2,055
Doctors of Medicine in attendance	14,484
No report and not stated	129
Cases completed before delivery	353
Number of cases receiving care	14,966
Fund E disbursed for cases completed during period	\$1,236,161.71
Average cost per case	82.60
Disbursed for physicians' care	635,350.10
Disbursed for hospital care	518,075.58
Disbursed to physicians & hospitals in single payment	59,329.99
Disbursed for consultation service	2,718.75
Disbursed for prenatal and postpartum care provided in clinics	16,567.40
Disbursed for bedside nursing	2,002.20
Disbursed for drugs, ambulance, blood for transfusions	2,117.69
Days of hospital care	116,129
Infant cases completed	499
Fund E disbursed for cases completed during period	\$ 45,122.19
Disbursed for physicians	10,889.50
Disbursed for hospitals	31,756.52
Disbursed to physicians and hospitals in single payment	2,142.36
Disbursed for medical care provided in clinics	61.76
Disbursed for drugs, am-	

balance, blood for transfusions	198.05
Disbursed for consultation service	35.00
Disbursed for bedside nursing	39.00
Average cost per case	90.43
Days of hospital care	6,722
Total disbursements for maternity and infant care for the period	\$1,281,283.90
Total Fund E received from April 8, 1943, to February 28, 1946	\$2,856,736.00
Total expenditures for maternity and infant care for complete and incomplete cases for the same period	\$1,998,636.57

### Normal Activities of the Maternal and Child Health Department.

This work which reached its peak throughout the State about 1941 has suffered somewhat on account of the demands of war service which took so many physicians out of private practice and reduced the nursing personnel in most local health departments, in some counties to a dangerous minimum, in fact taking the nurses entirely out of a few counties where their services were badly needed. Health officers having unusual demands on account of the war also forced some neglect in this work. However, for the period covered an immense amount of work was carried on, some of it in a superb manner. A detailed report follows:

Counties, districts and cities in which maternity and infancy centers were held: Alleghany-Ashe-Watauga, Anson-Montgomery, Beaufort-Hyde, Bertie-Chowan-Gates, Bladen, Cabarrus, Catawba-Lincoln, Cherokee-Clay-Graham, Cleveland, Columbus, Craven, Cumberland, Currituck-Dare, Davie-Stokes-Yadkin, Duplin, Durham, Edgecombe-Halifax, Forsyth, Gaston, Granville, Harnett, Haywood, Johnston, Lenoir, Martin, Moore-Hoke, Nash, New Hanover, Northampton-Hertford, Onslow-Pender, Orange-Person-Chatham, Pasquotank-Perquimans, Pitt, Richmond-

Scotland, Robeson, Rowan, Rutherford-Polk, Sampson, Surry, Tyrrell-Washington, Union, Vance, Wake, Wayne, Wilson. Asheville, Greensboro, High Point, Rocky Mount.

Places where clinics were held 218, physicians participating 144.

<b>Prenatal Service—</b>	<b>White</b>	<b>Colored</b>
Patients attending	1,620	12,587
Total patients visits	4,972	33,054
Wassermanns taken	1,777	11,985
Reported positive	52	1,204
Reported negative	1,525	9,972

<b>Delivery Service—</b>		
Patients assisted in securing medical attention at delivery	891	666
Patients found necessary to hospitalize	356	470

<b>Postpartum Service—</b>		
Examined by physician	454	2,752
Discharged in normal condition	454	2,752
Women reporting successful delivery of living health child	1,071	6,735

<b>Infant and Preschool Service—</b>		
Brought to center for examination—		
Infant	2,788	8,955
Preschool	3,329	4,041
Total visits—		
Infant	8,063	22,897
Preschool	6,553	10,956

Given preventive treatment against		
Smallpox: Infant	295	1,264
Preschool	3,692	2,538
Diphtheria: Infant	2,637	6,906
Preschool	4,009	4,756
Whooping Cough: Infant	2,134	3,912
Preschool	1,907	2,214

Estimated number of pieces of literature distributed in centers 77,445.

**Crippled Children's Work.** The work of this division continued unabated during the period. While several orthopedists entered war service, a sufficient number remained in practice who were willing to make the sacrifices in time required to conduct the regular established orthopedic clinics in a satisfactory

manner. The clinics conducted by this division in cooperation with the Vocational Rehabilitation Department of the State Department of Education, and cooperating with the State Orthopedic Clinic at Gastonia on a weekly basis and the State clinic at Goldsboro on a monthly basis, covered about twenty points in the State at not less than monthly intervals. The clinics were open to any children under 21 years of age for a free orthopedic examination by the clinician in charge. 17,079 children visited the 363 clinics conducted during the period. The total number of children under hospital care during the time was 2,100. 1,902 children were discharged from hospitals following treatment. At the end of the period there were 22,403 children on the State register. There were 503 outstanding authorizations for hospital and medical service of children approved for the treatment but for many reasons were not admitted to the service, sometimes because of lack of available hospital beds, etc. On the same date, December 31, 1945, there were 403 additional applications, most of whom had to be deferred for the lack of funds and for other reasons.

For the fiscal year ended June 30, this year, the U. S. Children's Bureau has allocated \$120,046, which comprises almost the sole source of financial responsibility for this department. Almost every cent of this money, with the very small administrative cost, is paid to physicians and hospitals for actual examinations, medical and surgical treatment and hospital care for these children.

**Mailing Room.** In conclusion, attention should be directed to the continued volume of work done by the mailing room which serves all departments of the State Board of Health. A detailed list of activities in that department follows.

#### Health Education

Monthly Health Bulletin—60,000 each month

Literature distributed-----2,763,516

New names added to mailing list	2,759
Names taken off mailing list	3,251
Morbidity reports	56
Multigraph copies	317,555
Mimeograph copies	834,392
Press articles	22
Radio talks	88
Envelopes addressed	40,317
<b>Maternity and Infancy</b>	
Prenatal literature	42,425
Infant literature	150,833
Silver nitrate	2,565
Miscellaneous supplies	67,260
Instructions for North Carolina	
midwives	3,731
1935 Midwife Law	1,235
Midwife Family Folders	3,255

Finally, mention should be made of the excellent work done by the multilith operator in serving all the departments with special type of printing.

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## DIVISION OF LOCAL HEALTH ADMINISTRATION

Dr. R. E. Fox, Director

**General.** On July 1, 1944, Mitchell County joined with Avery and Yancey Counties in the district health service. Also on July 1st, Caswell joined Rockingham in a district health service. With these two counties joining in full time health service, 91 of the 100 counties had full time local health service as of July 1, 1944. As of July 1, 1945, McDowell County joined Burke-Caldwell in a District Health Department. On this same date Warren joined with Vance County in a district health service. As of the date of this report, with these two additions, 93 counties are participating in whole time health programs, leaving only seven of the counties without such service.

As of July 1, 1945, the Forsyth program and the programs for the City of Winston-Salem were consolidated under one health service. This reduced the number of City Health Departments from six to five. There are sixty-six district, county and city health departments. Of the sixty-six health departments, forty are county departments,

twenty-one district departments and five city departments.

The war has left public health work very seriously crippled for public health workers, especially doctors and nurses. At present we have vacancies for twenty-three physicians in the local health departments (and five on the State Staff, or a total of twenty-eight). Out of a total of 360 nursing positions in local health units, there are at present sixty vacancies where no nurse at all is on duty and seventy-five nurses fill positions temporarily under War Emergency classification, making a total of 135 Public Health Nurses needed to fill all positions with qualified personnel. The number of the vacancies for physicians has been accentuated by the withdrawal by Public Health Service personnel assigned to the State during the war period.

Since July 1, 1944, there have been trained, or are now being trained, one health officer, ten public health nurses, five sanitarians, one laboratory technician, twelve public health educators and three follow-up workers, or a total of thirty-two individuals.

On July 1, 1944, Dr. Joseph C. Knox and Dr. J. Roy Hege resigned their positions with the Division of Local Health Administration. Dr. Knox went into private practice and Dr. Hege returned to Forsyth County as District Health Officer. Dr. William P. Richardson joined the Staff of the Division on September 1, 1944. On the same date, Dr. William D. Hazlehurst, an officer of the U. S. Public Health Service, joined the Staff of the Division of Local Health Administration. The Staff was further augmented by the return of Dr. J. Roy Hege as of July 1, 1945. Dr. Knox had been with the State Board of Health at the time of his resignation for a period of twelve years, during which time he served the Department most effectively as Director of the Division of Epidemiology and later in the directorship of the Division of Local Health Administration.

**Venereal Disease.** Since the previous



report, drastic changes have taken place in the venereal disease program in North Carolina. The active monthly clinic population has decreased from around 25,000 patients to about 8,000 patients. This reduction has been effected by the intensive treatment of syphilis at rapid treatment centers. Since April 1, 1944, a total of 13,674 patients have been admitted to the rapid treatment centers at Charlotte and Durham. At the present time, the admission rate for both centers is in the neighborhood of 800 patients a month.

In July of 1944, penicillin became available for the treatment of gonorrhea at rapid treatment centers. Shortly thereafter, intensive treatment plans for syphilis employing penicillin were developed, thus making it possible to discard the more dangerous intensive treatment with arsenoxide.

In July of 1945, penicillin in oil and beeswax became available for the one-injection treatment of gonorrhea, and the function of treating gonorrhea was returned to local clinics, thus making it possible to concentrate the efforts of the two rapid treatment centers on the treatment of syphilis. The rapid treatment centers have become an integral and essential part of the venereal disease program. To date, the functions of the rapid treatment centers have been limited largely to the treatment of early infectious or potentially infectious cases of syphilis. Only a shortage of doctors at the present time prevents our embarking upon a program designed to provide adequate facilities for the treatment of neurosyphilis. An invaluable function of the centers has been their availability to local clinics for diagnostic consultation and advice concerning the management of difficult cases.

It should be pointed out that although the case load of the clinics has decreased, the number of new admissions has remained essentially unchanged so far as syphilis is concerned; however, a greater proportion of the cases now being admitted are infectious or potentially infectious. Gonorrhea continues

to show a steady increase in admissions.

These accomplishments by the clinics have occurred in the face of severe personnel shortages, particularly among health officers, epidemiologists, and nurses. The shortage of personnel has become more acute toward the end of this period.

The research projects under the direction of Drs. William L. Fleming and John J. Wright have been continued at the School of Public Health at Chapel Hill. Dr. Fleming's project was replaced at the end of this period by research work which will be continued by Dr. Harold J. Magnuson.

In conclusion, it is reasonable to state that with the developments that have occurred in techniques of treatment and with the available clinic and rapid treatment center facilities in North Carolina, the venereal disease program can effectively reduce the incidence of venereal diseases progressively during the coming years provided only that adequate personnel becomes available locally to carry out the program.

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## VENEREAL DISEASE EDUCATION INSTITUTE

Mr. Capus Waynick, Director

The Venereal Disease Education Institute is a cooperative project set up in Raleigh at the beginning of the 1942-43 fiscal year for "demonstration and study of public educational measures in the control of the venereal diseases". The Institute is sponsored by the U. S. Public Health Service, the North Carolina State Board of Health, and the Z. Smith Reynolds Foundation.

A report has been submitted for the period ending April 1, 1944, and this brings the report of the activities of the Institute from that date through December 31, 1945. Much of the period covered by this report was that period in which the second World War was being waged, and the Institute was employed to a very large extent as the source of ideas and materials for educational work in the Army against the venereal infections. As a consequence

of this enlistment, a very large portion of the circulation of informational and educational materials shown were made through military channels.

The Chief of the Graphics Division of the Institute was appointed consultant in this subject to the War Department, and the Institute worked in close cooperation with the Office of the Surgeon General of the Army. To some extent that cooperation continues, but not at quite the rate of distribution of materials attained during the period of the war.

The Institute continues the demonstration of new materials as well as the distribution of those that have been tested. This distribution is made through health officers, health educators, and unofficial health societies in various parts of the country. Several of the educational devices of the Institute have been given wide distribution in areas outside of Continental U. S. A. Canada is a user of some of the materials and ideas of the Institute in that country's fight against venereal diseases.

The staff of the Institute is composed of the Director and a small staff of writers and artists. The agency operates under the direct control of the State Health Officer. Demonstrations of educational means and methods are carried on exclusively in cooperation with local health officers in the communities that are entered by staff forces. The distribution of materials by the Institute, July, 1944—December, 1945, is listed by months as follows:

July, 1944	188,722
August	119,014
September	113,718
October	286,375
November	2,865,293
December	1,415,998
January, 1945	72,674
February	62,929
March	589,805
April	78,036
May	125,903
June	203,328
July	63,199

August	113,780
September	346,506
October	732,001
November	88,278
December	51,836

Total	7,517,395
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## FIELD EPIDEMIOLOGICAL STUDY OF SYPHILIS

Dr. John J. Wright, Director

In the past year—January 1, 1945 through December 31, 1945—the principal activity of the Field Epidemiological Study of Syphilis has concerned itself with the accumulation of data pertinent to the measurement of prevalence of syphilis in the study area, which includes Orange, Person, Chatham and Durham Counties; with the measurement of the discovery rate and the attack rate of syphilis in the area. Data concerning the value of the epidemiological approach to case finding through clinical investigation of contacts of known cases is also being accumulated.

The data on measurement of trends in discovery, incidence, and prevalence is being accumulated from a serological register of all serological tests for syphilis made for private physicians and clinics in the area, and a case register of syphilis. The serological register is kept current through the cooperation of the Division of Laboratories. A case register is maintained on a current basis through the cooperation of the Central Tabulating Unit of the Division of Epidemiology, and through personal contacts with physicians practicing in the area. The private physicians have been most cooperative in making available for statistical purposes certain information concerning their private patients with syphilis. In the O. P. C. District, it has been found that the private physicians are diagnosing and treating 25.1% of all the syphilis recorded in that area and are reporting only a minor part of this.

Data on the prevalence of syphilis among special population groups that maintain a reasonably stable composi-

tion over a period of years is being accumulated. This includes selective service inductees, applicants for marriage licenses, and pregnant women.

The second phase of activity of the Study during the year was concerned with the analysis of data accumulated. A careful analysis of data has shown that prevalence rates based on serological tests alone do not provide a reliable index of trends of syphilis in the population at large because of uncontrollable factors of selection operating in the group tested and shifting to and maintenance of negative serologies in individuals as a result of intensive therapy in the Rapid Treatment Centers. The method of measurement of prevalence of syphilis in the area has been changed to measure the accumulation of syphilitics in the area by maintaining a complete and active case register, taking into account the additions and withdrawals of syphilitics from the community without reference to their serological status. Setting up and maintaining this type of register has been tedious and is not yet ready for analysis.

The study of prevalence of syphilis among selective service inductees has continued over a five year period. Because of the small number of men being inducted in 1946, the method can be no longer used. Over the five year period, the prevalence of syphilis among the white inductees in the O. P. C. Health District has dropped from 13.7 to 2.3 per 1000 men tested. At the same time there has been a reduction in the age of the men inducted. There has been a less marked reduction in the amount of syphilis among the colored men in this rural area, although the reduction in age has been as great as among the whites—falling from 99.3 per 1000 men inducted in 1941 to 51.9 in 1945. In the Durham area, the rates among both the white and colored inductees has been much higher and the drop in amount of syphilis among the whites much less marked—falling from 26.9 per 1000 men inducted in 1941 to

13.2 per 1000 men inducted in 1945. Among the colored inductees in Durham there has been a definite rising trend in syphilis over the 5 year period—rising from 160.0 per 1000 colored men inducted in 1941 to 174.4 in 1945.

The prevalence of syphilis among applicants for marriage licenses among white males has decreased slightly in the five year period, falling from 2.0 per cent of white male applicants in 1941 to 1.2 per cent in 1945. There was a slight increase in the amount of syphilis in white female applicants in 1945, 1.5 per cent positive as compared with 1.1 per cent positive in 1941. The colored male applicants showed about the same amount of syphilis in 1941 as in 1945—15.0 per cent in 1941 as compared to 14.0 per cent in 1945. The colored female applicants showed over twice as much syphilis in 1945 as in 1941—8.1 per cent in 1941 to 17.1 per cent in 1945.

Syphilis among pregnant white women has shown an increase over the four year period 1941-1944, increasing from 0.7 per cent to 1.4 per cent. Among the colored women it has remained constant at 7.9 per cent over the entire period.

As could have been expected, there has been a steady decrease in the discovery rate of syphilis over the period of the study due to the gradual exhaustion of the backlog of latent syphilis as the result of constant surveys. However, there has been noted a constant trend upward in the attack rates of syphilis over the period of the study. This has been observed in both white and colored, though more marked among the colored. This increase in the attack rate in the study area has been consistent with the increase in the amount of primary and secondary syphilis being reported in the state as a whole.

An analysis of the results obtained by the epidemiological investigation of contacts of diagnosed cases of infectious syphilis in the study area shows it to be the most productive case find-



ing method in use. In the rural O.P.C. area, 164 contacts were examined for each 100 white and colored patients with primary or secondary syphilis interviewed. Of those examined, 73 white persons and 107 colored persons were found to have syphilis for each 100 original patients interviewed, 66.7 per cent of them with infectious syphilis. Investigation of sexual contacts of patients with early latent syphilis interviewed produced 64 new white patients and 65 new colored patients per each 100 original patients interviewed.

The third phase of activity of the study concerned itself with teaching of venereal disease control in the school of Public Health and at the North Carolina College for Negroes. The epidemiological aspects of control; methods of case finding; and techniques of interviewing were taught to public health nurses and educators during the fall and winter quarters.

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## **DIVISION OF EPIDEMIOLOGY AND VITAL STATISTICS**

Dr. C. P. Stevick, Director

**Epidemiology.** One of the most important activities of the Division of Epidemiology during the latter part of 1944 was the preparation of a revision of the communicable disease regulations for consideration by the State Board of Health. The existing regulations had been adopted in 1936. The first step in the preparation of the proposed revision was the selection of a group of diseases to be included and to determine which of these diseases should be required to be reported. The reportable diseases of all other states were studied and the reasons for their reporting determined. It was felt that a large group of diseases ordinarily classified by other states as reportable did not need to be reported, for all practical purposes, since there were no accepted public health programs in existence for their control. The existing North Carolina list of reportable diseases was, therefore, revised so as to select only those diseases for which

a distinct control service was available to physicians and families by the state or local health departments. The proposed revision of the communicable disease regulations and the new list of reportable diseases were adopted by the State Board of Health in December 1944.

During the summer of 1944, and extending into the early part of 1945, North Carolina experienced its second poliomyelitis epidemic. The Division of Epidemiology was deluged with requests for information and advice. Certain phases of the control program were administered through the division, which worked in close cooperation with the American Red Cross and the National Foundation for Infantile Paralysis.

Early in the epidemic a meeting was held in Raleigh of the health officers of eight southern states together with communicable disease consultants of the U. S. Public Health Service, the University of Michigan, and the National Foundation for Infantile Paralysis. The various control measures available were discussed and a uniform policy adopted.

Shortly prior to the 1945 session of the State Legislature the Division of Epidemiology prepared analyses of the whooping cough and smallpox immunization problems existing in North Carolina. This material was presented to the Public Health Committee of the General Assembly along with proposed bills requiring state-wide whooping cough and smallpox immunization. These bills were enacted in March 1945 and, together with the bill passed in 1939 requiring compulsory diphtheria immunization, placed North Carolina in a favorable position as compared to other states with regard to immunization laws. The whooping cough statistics prepared by the division showed that, for all practical purposes, this disease is second only to tuberculosis as a cause of death from preventable communicable diseases.

Considerable field work was done by

certain personnel of the Division of Epidemiology in the summer of 1945 with the objective of stimulating improvement in communicable disease programs in local health departments and in simplifying record systems used in these programs. The extensive loss of health officers and public health nurses from local health departments in the past four years has considerably handicapped all of the activities of the over-all public health program in North Carolina.

The decrease in facilities, both public and private, available for continued emphasis on the immunization program became evident in the latter part of 1945 when the incidence of diphtheria in the state rose rapidly at the same time the disease increased in the remainder of the United States. In spite of this outbreak definite improvement in the diphtheria situation in this state is apparent when compared to the situation as it existed in 1939, at which time North Carolina's diphtheria rate was three times the national average. During 1944 the North Carolina figure was slightly less than twice that for the nation. It is possible that the extensive European diphtheria epidemic was, in some measure, responsible for the unexpected increase of the disease in the United States in 1945.

The reports for the two subdivisions of the Division of Epidemiology follow.

**Central Tabulating Unit.** In the past years the Central Tabulating Unit devoted a major portion of its facilities to venereal disease statistics. During the period covered by this report much of the venereal disease control work has been simplified so that more general use is being made of the statistical services provided.

A separate tuberculosis report card was put into use in 1945 so that the diagnosis of this disease could be specified as far advanced or minimal in each case. In 1945 approximately two-thirds of all active tuberculosis cases reported were beyond the minimal

stage. As the tuberculosis situation in the state improves and case-finding is placed on a more current basis, a rise in the percentage of minimal cases located will probably be one of the first indications of that improvement. Procedures have been worked out for processing the X-ray reports for the new state mass X-ray program now being developed.

The Central Tabulating Unit made preparations late in 1945 for undertaking the re-indexing of the approximately four million birth and death records on file in the Division of Vital Statistics. Since the indices in existence have now become practically unusable due to wear and numerous corrections, this project will be essential for the continuation of the service of providing certified copies of certificates to the public.

In 1945 a new monthly venereal disease morbidity report was begun in order to show syphilis case reports by the various stages of the disease in addition to the total reports of the other venereal diseases. An analysis of the stages of the reported cases of syphilis shows that the decline in syphilis case reports that started in 1939 and still continues has been due chiefly to a steady decline in congenital, late, and latent syphilis. The routine venereal disease reports prepared monthly for county health departments have been simplified and revised so as to demonstrate the degree of efficiency with which clinic operations and case-finding activities are proceeding. These reports were revised in accordance with recent trends in the venereal disease control policy under which local clinics are becoming diagnostic and contact-investigating centers and are limiting treatment to only those patients who cannot be referred to rapid treatment centers.

**Malaria Investigation and Control Unit.** During the period covered by this report, this unit took 18,734 blood slides from school children on surveys conducted in malarious counties and in

other areas where flare-ups of malaria occurred. The unit examined 10,213 blood slides, while an additional 5,028 were examined for us by the laboratory of the U. S. Public Health Service.

The increase in pond construction, due to the activity of the Soil Conservation Service in promoting the creation of ponds for fish, stock watering, and soil erosion, has more than tripled the number of ponds built in any preceding period of the same length. Arrangements have been made with the Soil Conservation Service to have the person proposing to build a pond first obtain a permit from us before they will participate in its planning or construction.

The end of the war brought a sharp curtailment in the war malaria program. The U. S. Public Health Service provided the forces, equipment, and materials for an extensive DDT Residual Spraying Program in areas proven to be malarious by positive blood smears. During the summer of 1945, slightly over 4,500 homes were sprayed with DDT. Arrangements have been made for a much larger program of this nature during 1946.

**Vital Statistics.** In October 1945, following the resignation of Dr. R. T. Stimpson, the Division of Vital Statistics was consolidated with the Division of Epidemiology. Due to the fact that the major portion of the statistical analyses of mortality data have been carried out, in recent years, by the Central Tabulating Unit of the Division of Epidemiology, the consolidation was a logical one.

During the last half of 1944 and the first part of 1945, requests to the Division of Vital Statistics for certified copies of birth and death certificates numbered approximately two hundred to three hundred per day. This volume of this particular activity represented a continuation of a tremendous expansion that first occurred during the early part of the war period, and the result was that all facilities available for the more fundamental statistical

activities of the division were exhausted.

During the latter part of 1945, however, certifications were reduced sufficiently to permit tentative planning of expanded statistical services. It is felt that increased emphasis can and should be given by the vital statistics program to supplying more statistical information to all interested agencies and thereby to constitute a more important center for data relative to population and mortality as well as birth statistical problems of all kinds.

With the recent consolidation of the divisions of Epidemiology and Vital Statistics increased opportunity exists for supplying consolidated morbidity and mortality statistics that can be of great value in improving the efficiency of the public health program and that will be a necessity of the more fundamental program of the medical care programs now being formulated in the state.

Early in 1945 the General Assembly adopted legislation requiring this division to provide a certified copy of the birth certificate to the parents of every child born after May 1945. Due to the fact that no funds were appropriated for this program, considerable difficulty was experienced in securing the necessary facilities; however, arrangements were finally made for the use of a photographic process and the work was scheduled to start early in 1946.

At the close of 1945 the following were the ten leading causes of death for North Carolina:

Disease	Deaths for the Year
1. Heart Disease (all forms).....	6,409
2. Intracranial Vascular Lesions	3,103
3. Nephritis .....	2,883
4. Cancer .....	2,287
5. Infant Diseases .....	2,142
6. Pneumonia .....	1,529
7. Accidents (excl. auto.) .....	1,322
8. Pulmonary Tuberculosis .....	1,068
9. Auto Accidents .....	641
10. Influenza .....	508

Cardiorenal causes of death continue to account for a rising percentage of



all deaths that occur. This is due primarily to the fact that a rapid decline in the number of deaths in the age group under thirty years is occurring and the population is increasing its content of elderly people. Unless favorable developments take place in the near future for delaying the degenerative process in the cardiorenal system of the human body, the age at which the highest per cent of heart disease deaths occur, that is, approximately seventy years, will become a ceiling beyond which our life expectancy of approximately sixty-six years today will not extend.

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### **DIVISION OF SANITARY ENGINEERING**

Mr. J. M. Jarrett, Director

During the period covered by this report the Division of Sanitary Engineering has been seriously handicapped because of the shortage of qualified engineers and sanitarians in all fields of activity. Despite this handicap, a considerable number of accomplishments have been recorded in engineering and sanitation activities. The milk program has suffered most and is possibly the only program which has definitely retrogressed during this period.

An attempt was made during the 1945 session of the Legislature to secure sufficient funds and personnel for this Division and to correct and improve some of our most important sanitation laws and regulations but with very little success. No increase in funds or personnel was received with the result that necessary services to local health departments and municipalities has been curtailed. Existing vacancies have not been filled because competent personnel could not be secured at the salary scale in effect in the State.

Legislation regarding the following subjects was requested but was not passed:

1. Improvement and clarification of drink stand law.
2. Control of commercial extermina-

tors using poisons dangerous to human beings.

3. State Code for installation of plumbing, heating, and air conditioning.
4. Clarification of law regarding inspection of jails.
5. Clarification of law regarding sanitation of State institutions.

Legislation was passed as follows:

1. Creation of Stream Sanitation and Conservation Committee. But with no appropriation or personnel.
2. Clarification of law regarding private institutions.

Briefly, some of the highlights of the Division's work during this period according to units are as follows:

**Engineering.** Two courses for water plant operators were given at North Carolina State College, with the Division cooperating in this work. The program is sponsored by State College, North Carolina Water Works Operators' Association, North Carolina Section of the American Water Works Association, and the State Board of Health. Certificates are given those operators completing the course of study.

A complete survey was made of all shellfish growing areas to determine the extent of sewage pollution reaching these areas. The U. S. Public Health Service cooperated by supplying a trailer laboratory and the technical personnel to do the work. The entire coast was covered, over 5000 water samples examined and polluted areas restricted.

A stream sanitation survey in cooperation with TVA was made of French Broad River basin to determine the extent of and means of correcting pollution in this area.

A Stream Sanitation and Conservation Committee was formed to study and report on pollution of all streams. The Director of the Division was elected Chairman of the Committee composed of representatives of State agencies and private industry.

A sanitary district was created at Spray, North Carolina.

Inspections were made of all War Food Administration Labor Camps and assistance was given on water supplies and sewage disposal.

Complete inspections and surveys were made of all interstate-carrier watering points and water supplies in cooperation with the U. S. Public Health Service.

Considerable time and effort was given to the design of abattoirs by the engineers, as well as handling of problems on water supply and waste disposal for these abattoirs.

Plans were developed in cooperation with FHA for procedure to follow regarding water supplies and sewage disposal of houses insured with FHA loans. There has been a large volume of this work and it is expected to increase.

Surveys were made and assistance given regarding waste disposal and water supplies for Prisoner of War Camps.

Much time has been devoted to the review of preliminary plans, reports, and applications for funds for non-federal Public Works improvements covering the construction of water and sewage facilities. The majority of the applications approved by the Federal Works Agency were for planning funds for the preparation of plans and specifications for water and sewage improvements.

Through cooperation of the State Department of Conservation and Development and the U. S. Geological Survey, the laboratory of the U. S. Geological Survey was moved from State College to the State Laboratory of Hygiene and complete chemical analysis are being made of all public water supplies in the state.

Improvements in filing of all plans for water and sewage systems in North Carolina were made through installation of new steel filing cases. All plans approved by the State Board of Health of these facilities are on file at the State Board of Health.

A mobile laboratory is being constructed to be used on milk, water, and stream sanitation. Equipment has been

ordered and the unit is expected to be ready for operation by July 1946. No personnel for operation is now available, but we hope to secure someone by the time the Unit is completed.

Special investigations and problems were handled as routine, such as two tropical storms on the east coast, floods, polio hospital sewage disposal, droughts effecting public water supplies, and special water and sewage disposal problems.

**Sanitation.** Considerable time was given to selecting and training sanitarians for local health units. Most of the men formerly with local units, who have returned from military service, are accepting positions outside of public health and we are having to train new men to replace them.

Special investigations were made of a number of sanitation problems for the Army and Navy.

Much emphasis has been placed on school sanitation and a suggested design of school lunchroom was prepared with engineering notes and specifications. Much interest has been manifested by school authorities in this program. Assistance regarding school canneries was also given considerable attention.

Numerous problems relating to OPA and abattoirs were handled as were other special problems brought about by the War and Government regulations.

Surveys of all State institutions were made and presented to officials with varying degrees of results being accomplished.

Studies are in process of being made regarding revision and clarification of all sanitary regulations.

A number of food handlers courses were given in cooperation with U. S. Public Health Service and local health departments.

Complete sanitary surveys of all summer camps have been made for the purpose of preparing an approved list for distribution.

Many other general sanitation prob-

lems relating to privy construction, nuisances, and complaints were handled as routine matters in cooperation with local health units.

In December, all Public Health Service lend-lease personnel were recalled by the Service which has further handicapped us with regard to personnel.

**Milk.** This Unit has possibly suffered more because of shortage of personnel than any other Unit. We suffered a great loss in the death of Mr. John E. Floyd, who had been with the State twenty-three years. It has not been possible to find a person of Mr. Floyd's qualifications to take over the milk work in the western part of the State.

It was hoped that the engineer formerly in charge of this work would return to North Carolina upon his release from the Army, however, he accepted a much more lucrative job elsewhere. Another of our qualified men accepted a position with the industry, leaving only two Public Health Service lend-lease men in the milk office.

A number of new plants have been constructed and much time is required in working with owners and architects on this phase of the program.

The quality of milk distributed to the consumer during this period has been very low and numerous complaints have been received. The shortage of milk has been and still is acute, making it necessary to bring in milk from out-of-state sources.

A laboratory was established at Lexington in connection with the local health department to add assistance in connection with Coble milk supply which affects the whole State. This laboratory is manned by a qualified bacteriologist.

Surveys have been made of as many supplies as possible and as much aid given to local health departments as our depleted staff could give. The future picture is not bright unless more competent personnel can be secured.

**Typhus Control.** This Unit has had the greatest expansion during the period covered by this report. The work

includes the ratproofing of buildings, trapping, and poisoning, and dusting with DDT to control the ecto parasites of rodents. The Public Health Service has contributed greatly to the progress of the work by making available men and materials. Projects on ratproofing were started during this period in: Concord, Wilson, Morehead City, Wilmington, Rocky Mount, Beaufort, Charlotte, Mooresville, Winston-Salem, and a project has been approved for Elkin.

DDT dusting operations were begun in July 1945 in Wilmington, Clinton, New Bern, and Wilson.

The dusting program has been mainly experimental and entomological studies are being made as part of this program. The results so far have been very encouraging and it is hoped that results shown will justify the extension of this program to other counties where endemic typhus has been reported.

**Bedding.** The one bedding inspector has carried on as well as one person could in enforcing this law state-wide. The work has been mainly routine and consists of inspection of manufacturing plants, sterilizers, bedding for sale, and the condemnation of bedding not properly tagged or sterilized. We hope to secure the services of a chemist for laboratory analysis of materials and another inspector in the near future. These positions are vacant now because of the men entering the military service.

**Statistical.** A brief summary of some of the more important activities is listed below. We have not included all inspection but have selected those activities of more state-wide importance.

#### **Engineering.**

<b>Public and Institutional Water</b>	
Supplies Inspected.....	862
<b>Public and Institutional Sewage</b>	
Works Inspected.....	431
Shellfish Plants Inspected.....	1,057
<b>Shellfish Water Samples</b>	
Examined .....	5,686
Plans Prepared and Reviewed..	178
<b>FHA Applications (Water &amp; Sewage) Processed.....</b>	
	187



Swimming Pools-----	41
Schools (Water & Sewage)-----	61
Abattoirs (Design—Water & Sewage)-----	220
FWA Grants Approved for Advanced Planning	
Water Projects—17 Towns—	
Advanced \$127,773.52—	
Cost of Projects Upon Completion \$3,919,413.00	
Sewer Projects—23 Towns—	
Advanced \$158,002.29—	
Cost of Projects Upon Completion \$5,841,126.00	
Incinerators—1 Town—	
Advanced \$1,900.00—	
Cost of Project Upon Completion \$64,000.00	
<b>Sanitation.</b>	
Food Handling Places Inspected	6,647
Hotels Inspected-----	462
Meat Markets and Abattoirs	
Inspected-----	2,911
Institutions Inspected-----	362
Camps Inspected-----	134
Schools (Sanitation) Inspected	342
Private Water Supplies	
Inspected-----	704
Private Sewage Disposal	
Inspected-----	1,022
<b>Milk.</b>	
Dairy Farms Inspected-----	1,860
Pasteurization Plants Inspected	275
Laboratory Visits-----	83
Milk Surveys Completed-----	56
<b>Ratproofing.</b>	
Ratproofing Projects Operated	9
DDT Dusting Programs-----	5
Buildings Ratproofed-----	1,186
Cost to Property Owners \$95,888.33	
Houses or Units Dusted with	
DDT-----	14,000
Pounds of DDT Dust Placed-----	13,000
Public Health Service Personnel	
on Typhus in N. C.-----	31
<b>Bedding.</b>	
Retail Places Inspected-----	1,598
Manufacturing Places Inspected	3,061
Pieces Condemned-----	8,051

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**DIVISION OF ORAL HYGIENE**

Dr. E. A. Branch, Director

**Summary of Corrective and Educa-****tional Work by Dentists.** April 1, 1944-December 31, 1945.

Number of counties visited-----	68
Number of schools visited-----	949
Number of children—mouths inspected-----	97,917
Number of underprivileged children receiving dental corrections-----	57,936
Amount and class of treatment itemized as follows:	
Number amalgam fillings-----	24,238
Number cement fillings-----	7,064
Number silver nitrate treatments-----	94,270
Number teeth extracted-----	47,308
Number children—teeth cleaned-----	56,358
Number miscellaneous treatments-----	5,196
Total number of operations-----	234,434
Number of teeth extracted that were six year molars-----	3,572
Number of teeth filled that were six year molars-----	18,157
Number of lectures on Mouth Health-----	2,276
Total attendance at lectures-----	99,408

It will be noted that during the period of time covered by this report, even though, due to conditions brought on by the war, the staff was greatly reduced in number, the school dentists worked in sixty-eight counties. These counties extend from the coast line to the Tennessee border. However, no county received as much service as was needed or as much as the county was willing to provide for in its budget. All of the counties of the State not represented in the report would have provided funds for this activity had we been able to secure dentists to send to them.

Nine hundred and forty-nine schools of the State were visited by a school dentist. This means that a dentist was in each school for one or two weeks. Every child in each school had the privilege of hearing, in his or her own classroom, the dentist discuss the importance of mouth health. Every child also had the privilege of having a dental inspection by the dentist. Those

not financially able to take care of their own dental needs received the necessary corrections while those who were financially able to do so were referred to their own dentists. This referral was done by means of United States postal cards signed by the school dentist and mailed to the parents.

97,917 children had dental inspections. This is one out of every ten children enrolled. The educational value of an inspection by a dentist can not be estimated. The follow-up can be stimulated and encouraged by the teachers or other health workers, but there is no one who can take the place of the dentist in making the initial inspection.

The number of children receiving the necessary dental corrections was 57,936. These corrections consisted of amalgam and cement fillings, nitrate of silver treatments, extractions, and the cleaning of teeth for a total of 234,434 operations. This is slightly less than four operations per child.

Of the 47,308 teeth extracted we find that only 3,572 were six year molars. These are permanent teeth and especial emphasis has been placed on the importance of caring for and preserving these teeth. That this number is far smaller than it used to be is most encouraging and leads us to believe that our efforts have resulted in the conservation of these first permanent teeth and, therefore, in better health for many of our children. A concrete example is furnished by a single school. The school dentist recalls that when he visited this school fifteen years ago it was necessary for him to extract over one hundred permanent teeth, while on his last visit he found only two permanent teeth needing to be extracted.

Of the teeth filled 18,157 were six year molars. Had they not been filled by the school dentists it would have been necessary to number these teeth among those to be extracted a little later.

We would like to stress the importance of the educational part of the

program. When the dentist goes into the classroom and talks about the value of proper dental care his very presence makes a deep and lasting impression on the children. 2,276 classroom lectures were delivered and were attended by 99,408 children.

Our puppet show which is now in its eleventh year is more popular with teachers and children than ever. During this period over 300,000 children have witnessed the show. Thousands upon thousands of these children have written letters to Little Jack, the hero of the show, and, in return, have received appropriate answers from him.

One of the most extensive phases of our activity is the distribution of supplemental dental health material to assist the teachers in their mouth health instruction. This material is available, without cost, to any teacher who requests it. The extensive use being made of the material is indicated by the following figures. During one month we distributed, in response to requests:

- 2,850 copies **Teaching Mouth Health In North Carolina** to classroom teachers
- 6,000 sheets **Graded Educational Material** to teachers in response to their requests for dental health material for classroom use
- 12,000 sheets **Graded Educational Material** distributed to the teachers by the dentists on our staff
- 45,000 sheets **Little Jack's Merry-Go-Round** to elementary schools to go in school papers and on classroom bulletin boards
- 2,000 **Little Jack Letters** used in answering Little Jack's fan mail
- 17,750 copies **Mouth Health Catechism** to dentists in private practice and to County Health Officers.

While we have reached a low point in the number of dentists on the staff we expect to increase the number as rapidly as possible. Our chief effort is now being directed toward recruiting the staff. In the near future we hope to have a staff of fifty dentists and to be able to render service in every county in the State.

**STATE LABORATORY OF HYGIENE**

Dr. John H. Hamilton, Director

In our last report we noted a decrease in most of the routine activities of the State Laboratory of Hygiene. In reporting the number of specimens examined or biologicis distributed for the period April 1, 1944, to December 31, 1945, we would create the misimpression that the usefulness of the State Laboratory of Hygiene is decreasing, if we did not call attention to the fact that for the last five months of this period; that is, from August, 1945, to December, 1945, that there has been substantial increases each month in practically every field of activity. For instance, during the 21 months' period ending December 31, 1945, the laboratory examined 731,965 specimens; whereas, during the previous 21 months there were 878,790 specimens examined. This represents a marked reduction in activity. However, during the last five months of 1945 we examined 176,183 specimens as compared with 162,180 during the last five months of 1944. This trend is even more pronounced when we observe that each month during this five month period the work in 1945 was in excess of that for the same month of 1944.

The number of specimens of water examined during the 21 month periods were 12,564 for the one ending in December, 1945, and 12,855 for the period ending 1944; whereas, during the last five months of 1945—2,985 specimens were examined as against 2,781 during the last five months of 1944.

Another factor which enters definitely into the reduction of the total number of examinations during the current 21 months is the fact that in February, 1945, the Laboratory discontinued the making of serological tests for syphilis for the Selective Service Boards, and that after that time only a relatively small number were sent to the Laboratory from these boards. The serology of syphilis continues to be one of the important activities of the Laboratory. During the 21 months end-

ing December 31, 1945, the Laboratory made 600,717 tests on specimens sent in from our civilian population. During the previous 21 months there were 631,386 tests. However, during the last five months of 1945 there were 141,161 serological tests for syphilis as compared with 133,360 during the last five months of 1944. Each month from August through December, 1945, showed a substantial increase over the same month of 1944.

A tabulation of the specimens examined from July 1, 1944, to July 30, 1945, gives the following results:

	No. Spec.	No. Pos.	% Pos.
White—			
Male	45,397	2,628	5.7
Female	97,449	3,669	3.7
Negro—			
Male	37,474	8,339	22.5
Female	76,961	13,781	17.9
Indian—			
Male	277	38	13.7
Female	1,267	129	10.1
<b>Purpose for Which Specimens Were Sent.</b>			
	No. Spec.	No. Pos.	% Pos.
Diagnosis	75,568	10,489	13.8
Check on			
Treatment	13,665	5,809	42.9
Prenatal	46,630	1,692	3.6
Marriage	14,807	817	3.6
<b>Certain Occupations.</b>			
	No. Spec.	No. Pos.	% Pos.
Cosmetologist	5,142	175	3.4
Midwife	455	16	3.6
Food			
Handlers	21,276	1,532	7.1
Domestic			
Servants	11,791	2,174	19.0
Teachers	3,645	157	4.3

It would seem that so far as the decrease in specimens examined by the State Laboratory of Hygiene are concerned that the war was the direct cause. It reduced the number of physicians available to the civilian population. It decreased the personnel in the local health departments—it inhibited long range plans for protection and



concentrated our thoughts on the problems of the moment. The figures from which this report is compiled indicate that the downward trend in services rendered has been reversed and that the State Laboratory of Hygiene will soon be performing as large a volume of work as it did in 1940 and 1941 when the graph of its activities reached an all time high peak.

Of the biological products distributed by the Laboratory there were 985,153 cc. of Typhoid Vaccine shipped from the laboratory during the current period and 986,511 cc during the previous 21 months. During the last five months of 1945 there were 136,450 cc as compared with 45,810 shipped during the last five months of 1944.

Another of the biological products which is distributed free by the State Laboratory of Hygiene is smallpox vaccine of which there was sent out an amount sufficient to protect 546,894 persons during the current period as compared with the number—492,752 during the previous period. Both typhoid and smallpox vaccines have been distributed for many years and the demands for these products have become somewhat stabilized.

The Improved Pertussis Vaccine which we are now distributing has been available only since 1941. Notwithstanding the fact that we are required to make a substantial charge for this product, the demands for it have increased rapidly during 18 of the 20 months covered by this report. The amount of Pertussis Vaccine sold has been considerably greater than it was for the same months of the previous year. For the period ending December 31, 1945—292,330 cc were sold as against 188,160 for the comparable preceding period.

Pasteur treatments were 1,179 for the current period and 1,210 for the previous period. It has now been six years since we started to prepare anti-rabic treatments by the Semple method. To date we have had no report of any accident due to treatment.

Schick Test Material distributed during the current period and the previous one are essentially the same—235,469 and 231,598. In our previous report we called attention to the decrease in the amount of Diphtheria Toxoid distributed. During the current period there was a slight increase in the amount of this product distributed but this increase was due to the fact that the amount distributed during the last five months of 1945 were considerably in excess of the amount distributed during the last five months of 1944—60,979 cc in 1945 and 47,069 cc in 1944. The total amounts for the two periods were 235,469 and 231,598. As might be expected, the amount of Diphtheria Antitoxin distributed during the current period was much greater than during the previous period—108,874,000 units during the current period as compared with 81,646,000 units during the previous period. This merely repeats the experience which we have had over and over again—that when there is a decrease in the use of an immunizing agent for diphtheria there is an increase in the demand for diphtheria antitoxin. We either prevent diphtheria or treat it. It is more costly to treat it than it is to prevent it.

During the current period the laboratory purchased a supply of Penicillin primarily for resale to other state institutions and hospitals. A considerable portion of this was also resold to physicians. It is felt that we rendered a service not only in making this product available but in playing a part in bringing down the price.

The American Red Cross allocated a supply of human Immune Serum Globulin for the prevention of measles. This product was delivered to the laboratory free of charge and sent to health departments, physicians and hospitals free. It has become a very popular product.

We have continued our effort to improve local laboratory service, even though the personnel problem in local laboratories has been even more diffi-

cult than it has been with the State Laboratory of Hygiene. A number of the local laboratories have been closed because they were unable to hire competent laboratory workers and have been reopened whenever suitable personnel could be employed. New local laboratories have been added. Although the number varies, there are approximately 80 of these local laboratories now which have been approved for the making of serological tests for syphilis under the State Marriage Law. This number is too large for the present personnel of the State Laboratory of Hygiene to supervise properly. The work done by these local laboratories is large in volume. The serological tests performed by them totals the approximate number made in the State Laboratory of Hygiene. There has been considerable improvement in the physical equipment of these local laboratories. Many still need improvement. It is likely that the next year will bring a more available supply of laboratory equipment and that competent laboratory workers will be more plentiful. The local laboratories should show even more improvement during the next twelve months than they have during the past.

Our personnel problems were increased tremendously during the war. Up to the present time we see little increase in the availability of laboratory personnel.

With the facilities available to it the Laboratory has endeavored to contribute as much as possible to the public health program. The members of the staff who have resisted the temptation to leave have manifested loyalty and devotion which has been heartening. With them we can look forward with confidence to a brighter day and a better world.

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#### **SCHOOL-HEALTH COORDINATING SERVICE**

Dr. E. H. Ellinwood, Director

The School-Health Coordinating Service has been in operation for the past seven years. It is an unique organiza-

tion in that it is sponsored jointly by the State Board of Health and the State Department of Public Instruction. The staff of this service has been most successful in improving the school-health programs and in coordinating the services of the local health department and the schools in the 33 counties in which it has worked.

**Purpose.** The purpose of the School-Health Coordinating Service is to train teachers to do a large share of the health instruction in their daily contacts with the pupils and, in cooperation with the local health departments, to simplify and facilitate health service for the school children. To fulfill this purpose, three approaches have been utilized, (a) Pre-Service Training in Teacher Colleges, (b) Summer Conferences, and (c) In-Service Training for teachers in the schools.

**The Pre-Service Training in Teacher Colleges** has received very little attention during the war period but greater emphasis is now being focused on this part of the program. Renewed interest has been created by the action taken by the College Conference Board. This Board, in cooperation with the Department of Public Instruction, has passed a resolution recommending ten semester hours credit in health and physical education for elementary teachers and six semester hours credit for high school teachers on the Pre-Service level. Several Teacher Colleges are now preparing to give this necessary instruction to students. However, this is a slow development, as faculty, curriculum, time, and funds must be found before such a program can be carried out.

**Summer Conferences** have been held each year since 1940 at the Woman's College, at the University, at the North Carolina College for Negroes; and at Bennett College since 1941. To date 774 white and Negro teachers have received training at these institutions. Three conferences were held in 1944 and 1945; one at the Woman's College, one at Bennett College and one at North Carolina College for Negroes.

Fifty white and 165 Negro teachers

received training during these two years. Conferences were not held at the University in 1944 because of the poliomyelitis epidemic and in 1945 there were not enough applicants and those who applied were transferred to the Woman's College.

**In-Service Training** has occupied the major part of the time of the staff. Since April, 1944, through December, 1945, the teachers (both white and colored) in the following school administrations were visited by the entire staff for In-Service instruction: Pitt, Polk, Rutherford, Cleveland, Catawba, Lincoln, Cabarrus, Gaston, Mecklenburg counties and the city of Charlotte. In the last four administrations the work was not completed in 1945. A part of the staff worked in New Hanover and Greene counties. In all these schools every teacher was instructed in screening methods, communicable disease control, healthful school living, nutrition health teaching and physical education. All the school children have been screened and those needing attention have been examined, the defects defined, and in many instances corrected. The number of schools visited were 437 (39 high, 348 elementary), the number of teachers reached were 2,973 (736 high, 2,020 elementary); and the approximate number of children reached were 90,-835 (21,630 high and 69,197 elementary).

The following tables indicate the scope of the work completed by the School-Health Coordinating Service from April, 1944, through December 31, 1945.

TABLE I

Number of Screening Demonstrations Conducted

Number of Schools Visited		
County	White	Colored
Pitt	16	55
Polk	26	8
Rutherford	26	15
Lincoln	19	13
Catawba	25	7
Cleveland	31	34
Total	123	132

Number of Teachers Participating		
County	White	Colored
Pitt	163	152
Polk	256	15
Rutherford	205	42
Lincoln	107	28
Catawba	233	55
Cleveland	221	129
Total	985	421

Number of Pupils Screened		
County	White	Colored
Pitt	5,705	3,800
Polk	1,618	145
Rutherford	4,975	237
Lincoln	3,457	300
Catawba	7,434	233
Cleveland	6,889	1,974
Total	30,078	6,689

Number of Defects Found		
County	White	Colored
Pitt	----	----
Polk	1,070	12
Rutherford	-----	-----
Lincoln	1,198	116
Catawba	2,220	112
Cleveland	2,312	164
Total	6,800	404

TABLE II

Number of Health Education Lectures and Demonstrations

(Including Nutrition, Physical Education, Communicable Disease Control, Sanitation Inspection, Health Instruction in the High and Elementary Schools)

Number of Teachers Reached		
County	White	Colored
Pitt	232	175
Polk	69	15
Rutherford	195	49
Lincoln	121	24
Catawba	317	45
Cleveland	309	95
Total	1,174	380

Approximate Number of Pupils Reached

County	White	Colored
Pitt	8,120	4,375
Polk	2,415	450
Rutherford	6,825	1,250
Lincoln	4,235	720
Catawba	11,095	700
Cleveland	10,815	2,850
Total	43,505	10,345



Work has been in progress since September, 1945, in the following counties: Gaston, Cabarrus, Mecklenburg, City of Charlotte.

**Staff.** The staff used for In-Service Training is provided in part by the State Board of Health and in part by the State Department of Public Instruction. At present, they number eleven: two doctors, four public health nurses, two nutritionists, two physical education advisors, and one health educator. Of this number, one doctor, one nurse, and one nutritionist are colored and work in the colored schools. In the budget for this year are items for one colored health educator and one psychiatrist. When these two members are employed, the unit of field workers will be complete.

**Local Coordinators at Work.** Experience has shown that to be effective and lasting, there must be employed in the county a person whose duty will be to carry on the work after the school-health staff leaves. In September 1945, five health coordinators started work in Wayne, Nash, and Rutherford counties and in the cities of Rocky Mount and Greenville. These coordinators had received one year's training in health education at the University of North Carolina School of Public Health. They are now well established in their respective counties and are proving to be valuable workers in promoting the school-health program. Six coordinators are in training now and approximately ten more will enter school in September, 1946.

**Cooperative Planning.** The joint operation of the School-Health Program is now recognized as the most far reaching procedure which has yet been undertaken by the two departments to improve the health of the school child. One illustration of the good effect of this cooperative planning has been the recent work of a committee composed of members of the two state departments. During the past six months this committee, through three sub-committees representing health instruction,

health service and healthful school environment, has been formulating general policies and procedures for a statewide health education program. As a result of this study, a Permanent School-Health Advisory Committee composed of ten representatives, five from each state department, has been appointed by the heads of the State Board of Health and the State Department of Public Instruction. Its function will be to aid the School-Health Coordinating Service in carrying out its program. It should prove most helpful in bringing together the resources of the various divisions within the two departments which are directly concerned with the health of the school child, and in harmonizing recommendation made by the staffs of the two departments.

**Future Plan of Work.** Considerable interest is now manifested by many schools throughout the state in the work of the School-Health Coordinating Service. Under the present organization we are unable to meet the requests for assistance which come to the Raleigh office. It is apparent that the School-Health Coordinating Service must assume statewide proportions if we are to meet the challenge that is before us. It is with this thought in mind that we are planning to make our services available to a larger number of counties next year. Also, we must allow more time for the members of our staff to give consultation service throughout the state. To initiate such a program we are proposing a series of eight to ten county workshops in co-operation with the University of North Carolina Extension Division. While these workshops are being conducted, the School-Health Staff will supplement the work of the Extension Service and at the same time will work in some of the larger school units in nearby counties. When such a program is carried out our staff might well serve as many as twenty counties in one school year. These workshops will be held in counties where health educators

are already working so that they can be responsible for the organization and promotion of the workshops and also to insure the continuation of any programs started during the workshop period. When these workshops are well established, it is believed that the school-health work will be enormously advanced in all its aspects, including health instruction, healthful school living and health service.

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### BUREAU OF NUTRITION

Dr. W. P. Jacocks, Director

The Nutrition Division of the North Carolina State Board of Health has two principal objectives; first, to promote a better understanding of the importance of nutrition as a factor in the maintenance of good health; second, to help establish in each community, a sense of responsibility for the nutritional status of each of its citizens. It follows, therefore, that any work carried on by the Division must be based on an appreciation of the needs of the people of the State and of the resources of the State. As a consequence the Division has made an effort to use community resources outside the Health Department in order to avoid duplication of activities and to enhance the effectiveness of nutrition education through joint planning and work with other agencies.

During the period under review the Nutrition Division has carried on an educational program in fifty\* counties and cities in the state through the pub-

lic health departments (Nurses), schools (teachers) and adult groups in the communities (parents) and through them to the children of the State.

**Health Departments.** Assistance was offered to the Public Health Nurses working in Greene County in the spring of 1944. In Lenoir County the nurses staff conference period, for seven weeks was devoted to a discussion of nutrition, led by the nutritionist. The conferences were attended regularly by the health officer, and other health department personnel as well as by the nurses. In addition to discussions on normal nutrition, the nurses selected topics on the role of nutrition during pregnancy, in infant feeding and the diet in tuberculosis.

At a meeting of the Consultant Public Health Nurses of the State held in Raleigh a series of conferences such as the one being given to the nurses of Lenoir County was requested for all public health nurses in the State and plans were made to conduct these conferences. It was decided that it would require about 12 hours to discuss with the nurses the newer knowledge of nutrition and its application, including methods and materials suitable for the teaching of nutrition, and the modifications of the normal diet necessary in specific diseases. Much of the time of the conferences was devoted to a discussion of particular problems brought up by the nurses and which related to their own work. These conferences, begun in March 1945, have been attended by 132 nurses and 20 health and lay workers in 50 counties.

**Schools.** Work with teachers was carried out in Greene, Lenoir, Caswell and Rowan counties.

**Greene:** A nutrition program was started in Greene County in February 1944. In order to become acquainted with the local problems two staff nutritionists spent several weeks working in the county with local health and school administrations and with teachers and parents in the communities. During this time the health officer and the

\*Dare, Currituck, Camden, Pasquotank, Perquimans, Chowan, Gates, Hertford, Northampton, Halifax, Edgecombe, Nash, Wilson, Wayne, Greene, Lenoir, Craven, Carteret, Onslow, Pender, New Hanover, Sampson, Warren, Franklin, Vance, Granville, Person, Orange, Chatham, Alamance, Caswell, Guilford, Rowan, Cabarrus, Mecklenburg, Gaston, Lincoln, Catawba, Cleveland, Rutherford, Polk, Avery, Mitchell, Yancey, Graham, Clay, Cherokee, Pitt, Stanly, City of Rocky Mount.

public health nurses held a series of school clinics in which children selected by the teachers as presenting health problems were given general physical examinations. The parents were invited to be present at the examinations. The nutritionists thus had an opportunity to converse with both parents and children and were able to learn much concerning the food habits of the people in the county. The nutritionists also learned something of the interests and reactions of adult groups in the county by attending several Home Demonstration Club meetings and Parents Teachers Association meetings.

The first step in setting up this nutrition program was to conduct a series of nutrition classes for school teachers. The classes were held in the afternoon two hours a week for three weeks. Three groups of white and three groups of colored teachers met for these classes and a total of 150 white teachers and 180 colored teachers attended. In these classes essential nutrition information was discussed in order to provide the teachers with a better background of knowledge of this science. Methods of teaching nutrition to children were discussed also and at the conclusion of the classes the nutritionists offered individual assistance to any teacher who wished to include nutrition in his teaching. Units of study were planned for the children on the basis of their nutrition needs and grade levels and these were furnished to the interested teachers. A total of sixteen teachers received this service. Others requested help but time did not permit the starting of any other units of work so near the end of the school year.

Lenoir: Preliminary meetings were held with 8 groups of white teachers and 2 groups of colored teachers to discuss with them the place of nutrition in the school health program. From these groups 92 white teachers and 86 Negro teachers elected to take an eight hour refresher course in nutrition. Upon the completion of the refresher course all teachers who desired assist-

ance in the planning of a program of nutrition for their particular class were given individual help. Although the classroom teachers did the teaching the nutritionist held several conferences with teachers after the work was started.

Caswell: At the request of the District Health Officer and the County Superintendent of Schools, a nutritionist was assigned to Caswell County in March, 1945. Here, as in Greene and Lenoir counties, an eight-hour refresher course in nutrition was held for the teachers. Seventy-one white teachers and 59 Negro teachers attended these courses which were held at several centers in the county. From these groups, 59 white teachers and 23 Negro teachers conducted nutrition units in their class rooms. A larger number of teachers requested assistance in starting some nutrition work, but time did not permit the nutritionist to fill these requests.

The work in Caswell County during the spring was so well received and the people in the county cooperated so well it was decided to make this county a demonstration area. As a consequence, the nutritionist resumed her duties there in the fall and work with the teachers was continued.

Rowan: The third nutritionist was assigned to Rowan County. In this county, as in other counties, a refresher course was offered to teachers in the county and city schools systems. The work was still in progress at the end of the year.

**Community Work.** Greene, Lenoir and Caswell counties: The problem of reaching all people in the community with nutrition information was difficult. Leaders in Greene County suggested that a good method of reaching the rural population was to train volunteer leaders who would in turn disseminate the nutrition information to small groups in their own neighborhoods. This was done. Meetings were held with the leaders of both white and Negro groups. In one, the leaders dis-



cussed the importance of nutrition as a community responsibility and their role in raising the nutrition standards. At the second meeting, the nutritionist gave a demonstration of ways of using one of the types of food found to be lacking in the diet of these people, explaining its importance in the health of individuals. This information the leaders were to take back to smaller groups. This plan has been used in all counties where community programs have been conducted.

**Summer Conferences.** The staff of the Nutrition Division and the Nutritionists with the School-Health Coordinating Service assumed responsibility for the nutrition teaching at the Health Conference for Teachers held at Woman's College and Bennett College in Greensboro and at North Carolina College for Negroes in Durham during the summer schools which lasted six weeks. A course in methods and materials in nutrition education were taken by all the teachers. In general, this included a study of the significance of nutrition; organization of a 12-year nutrition program to begin in the first grade and continue throughout the twelve years of school; aims and objectives for teaching nutrition at the various grade levels; methods of teaching nutrition at the various grade levels. In addition, the lower elementary teachers observed the teaching of nutrition to third and fourth grade children in the Summer Demonstration School, and had an opportunity to teach nutrition to these children. Special programs in nutrition education were planned for the primary, upper elementary and secondary school teachers.

The Principal Nutritionist taught nutrition to the Health Education students in the School of Public Health during the regular summer session of the University of North Carolina. Many of the health educators will be employed in local health units in the State and it is especially important that they have a thorough understanding of nutrition and are familiar with the nutri-

tion program of the State. The present plan is for health educators with this training to assist with nutrition programs in the counties with the guidance of the senior nutritionists.

**Dietary Surveys.** Surveys of the food habits of both children and adults have been made in various sections of the State. During 1945, three-day dietary surveys of over 700 school children were made in Martin, Rutherford, Rowan, Caswell, Cumberland, and Clay counties among both white and colored children. One-day dietary records of 1702 adults working in cotton and rayon mills in Cumberland and Robeson counties were obtained by individual interviews when the workers were being X-rayed. The results of these surveys have been used as a basis for the educational projects developed in the demonstration areas of the State. Reports of the surveys are in the process of preparation.

**Miscellaneous.** The nutritionists worked with the North Carolina State Nutrition Committee which was affiliated closely with Federal Nutrition activities, there being nutrition committees in most of the 100 counties of the state. All of the nutritionists of the State Board of Health are members of the State Nutrition Committee and each is represented on one or more of the sub-committees, such as the sub-committee on Nutrition Education and the sub-committee on Materials.

Numerous requests for talks on nutrition have been received and when possible these have been filled. The groups met included county medical societies, teachers conventions, civic clubs, women's clubs, and college groups.

**Staff.** Replacements for those who resigned had not been secured at the end of the year. On the 31st of December, 1945, the staff consisted of the director, the principal nutritionist and a senior nutritionist.

It is realized that the amount of work described herein is entirely inadequate for the needs of the State and this condition will remain until

the staff can be brought up to the level as first planned, that is, one medical nutritionist, and one principal nutritionist and enough senior nutritionists to meet the needs of the State for consultant service. An adequate staff could do valuable work if the health organizations in the counties were supplemented to the extent that they require. By that it is meant that each local health department should have on its staff some person (nurse, health educator or other) with sufficient nutrition training to enable her to conduct the nutrition phases of the health program in a satisfactory manner with the assistance of the district adviser.

There are also needed at headquarters adequate laboratory staff and equipment to study nutrition problems and examine the material collected in the surveys. This means the employment of a well trained chemist and technical assistants.

## DIVISION OF INDUSTRIAL HYGIENE

Dr. Otto J. Swisher, Jr., Director

**Medical.** This report of 18 months covers mostly the studies of the mica industries and the asbestos textile industries. Tuberculosis case finding work has been carried on among a rather wide range of other industries of varying sizes and also included school teachers, the N. C. School for the Blind, and the N. C. State Prison.

The examining unit has X-rayed, with the 4" x 5" photoroentgen unit, the employees of the dusty trades and has also done much tuberculosis work. Since the miniature film is much cheaper than the full size conventional one, this effects a substantial saving of material and at the same time provides us with a stereoscopic pair of films in each case instead of the usual single flat film. This is of great advantage in the satisfactory chest examination of certain individuals, especially women.

	1936-38	1938-40	1940-42	1943-44	April 1944- Dec. 1945
Examinations—Clinical & X-ray— 1934-44 1944-45	5885	3314	5928	1679	3245
Mica Industry	741	2156			
Asbestos "	839	657			
Granite "	99	432			
Blood Specimens for Serological Tests -----	3100	2780	5800	1369	1524
Autopsies -----	3	2	3	1	1
Compensation Hearings— Testimony Rendered -----	6	21	29	4	2
Papers, Lectures -----		6	8	3	4
Case Reports for Compensation Hearings -----		12	35	8	6
Exhibits -----					1
4x5 Stereo-Films in Tbc. Case Findings -----				583	9503

**Engineering.** The engineering section has been greatly understaffed — there being only one engineer employed by the State of North Carolina and one assigned to this Division by U. S. Public Health Service. Demands for engineering services were of such magnitude that only plants engaged in war work and industries known to furnish the most serious occupational disease hazards, i.e., silicious dust industries, re-

ceived attention deserved. There remain hundreds of other plants throughout the State that should be investigated for potential occupational disease hazards. This is especially true in the highly industrialized Piedmont section of the state. Work assigned this Division by the N. C. Industrial Commission relating to silicious dust trades demands that serious consideration be given to decentralization of engineering

activities by the placement of personnel in western North Carolina.

With a staff of two engineers much effort was exerted to render qualified services to munition plants, shipyards, mines, and other war time industries furnishing occupational hazards not common during time of peace. The 600 samples of atmospheric contaminants, other than dust, collected and analyzed, illustrate attention given to problems arising chiefly with these industries.

Following the close of the war many new industrial plants are coming into existence and should be investigated by this Division as well as the many other plants that were neglected. It appears that a greatly expanded Industrial Hygiene program is necessary in order that industrial workers, who are growing in number in North Carolina, may receive the protection which should be given by this Division.

#### ENGINEERING ACTIVITIES

April 1944 - December 1945

##### I. Field.

A. Plants visited .....	423
1. For routine inspection.....	256
2. For special Industrial Hygiene Surveys.....	167
a. Samples atmospheric contaminants collected	778
(1) Dust .....	536
(2) Other .....	242
3. Number workers involved	87,104

##### II. Laboratory.

A. Analyses .....	1,277
1. Dust .....	677
a. Particle count.....	594
b. Particle size.....	61
c. Petrographic .....	22
2. Other contaminants.....	600

##### III. Miscellaneous.

A. Reports .....	426
1. Routine inspection.....	240
2. Special Industrial Hygiene Surveys .....	163
3. Monthly .....	21
4. Annual .....	2
B. Conferences and Meetings.....	25
C. Papers presented .....	1

#### BUREAU OF TUBERCULOSIS CONTROL

Dr. T. F. Vestal, Director

The Bureau of Tuberculosis Control was organized January 1, 1945, under the direction of Dr. T. F. Vestal. The first money for operation was \$18,683 made available by the Federal Government through Grant-in-aid funds. This sum was given to the State in May 1945.

During the first six months of its operation, the primary task of the Division was the organization and development of a program. Initial steps were taken for the securing of equipment and personnel for the carrying out of a mass radiographic program.

Out of the first budget, two General Electric photoröntogen mobile units were ordered, each unit being so designed as to take 4" x 10" (stereo), 70 mm. and 14" x 17" films. One of these units was delivered in October, 1945, but due to the fact that the division had no mobile equipment in which to house it, the X-ray unit was loaned to the Division of Industrial Hygiene and a joint program of both industrial and tuberculosis surveys was carried out. (The activities of this unit is to be incorporated in the report of the Industrial Hygiene Division). The second unit is to be delivered in early 1946.

On July 1, 1945, the Division began operating on a new 1945-1946 budget. The budget was \$112,000 of which \$20,000 was appropriated by the State Legislature and \$92,000 given to the State through Federal Grant-in-aid funds. Out of this budget provisions were made for the following:

Director

- 2 P. H. Physicians
- 3 Sr. P. H. Nurses
- 1 Assistant Bacteriologist
- 4 Sr. X-ray Technicians
- 4 Jr. X-ray Technicians
- 1 Dark Room Technician
- 1 P. F. Trainee
- 1 Key Punch Operator
- 1 Sr. Steno. Clerk
- 4 Jr. General Clerks

Additional funds were provided for



purchase, maintenance and operation of the equipment.

Out of this budget two additional General Electric Photoroentogen units have been ordered and several more are contemplated.

A 35 mm. portable photoroentogen was loaned to the State by the U. S. Public Health Service on July 10, 1945, for use in mass survey work. Since being loaned, this unit has surveyed over 20,000 individuals. Its first project was the Cannon Mills, Kannapolis, and following this the Cannon Mills in Concord were surveyed. The unit is presently engaged in a survey of Stanly County. From the X-ray diagnosis of these survey films, 81 had tuberculosis, 191 had suspicious lesions and 80 had some other chest pathology. We are not able to say, at the present, just what the actual number of proven cases will be.

In November, 1945, a thirty-three foot trailer was obtained from the U. S. Public Health Service and this is being converted for use in the survey program. In addition, the Division has purchased a 1½ ton tractor truck with which the trailer will be moved. By the time this unit is ready, the Division hopes to have a photoroentogen unit to place in it.

The program of the Division has been greatly handicapped by the shortage of personnel and the inability to obtain equipment. An improvement in this situation is anticipated during 1946.

\* \* \*

## PUBLIC HEALTH PUBLICITY

Mr. Wm. H. Richardson,

Publicity Specialist

During the period covered in this report, namely from April 1, 1944, through December 31, 1945, the Senior Publicity Specialist, employed by the State Board of Health, in the Division of Central Administration, has continued to prepare, edit and distribute news releases and to give weekly broadcasts over Station WPTF, in Raleigh.

In the summer and fall of 1944, he cleared, through the press, daily bulle-

tins prepared by the Division of Epidemiology on the poliomyelitis epidemic which visited our State during that period. In addition to these bulletins, and various newspaper articles which he prepared on the subject, he gave a number of special broadcasts, over WPTF, in which he sent out appeals for precaution made by the State Health Officer. These broadcasts, some of which were transcribed, were in addition to the regularly-scheduled weekly talks on various public health subjects.

Much of the publicity of the period for which this report is made, both through the press and over the radio, has been in the form of appeals for the enforcement of our laws requiring immunization of children against diphtheria and whooping cough—and for the adoption of measures designed to combat other preventable diseases.

The "NBC Transmitter," of New York, official organ of the National Broadcasting Company, in its May, 1945, issue, carried an article on the broadcasting activities of the North Carolina State Board of Health, together with a picture of the Senior Publicity Specialist, who, from time to time, has written articles that appeared in "We The People," organization of the North Carolina Citizens Association, Inc., and other publications requesting material on the activities of this Department.

The Senior Publicity Specialist has been a frequent contributor to The Health Bulletin and has made special broadcasts designed to assist the American Red Cross, the North Carolina League Crippled Children, and the North Carolina Tuberculosis Association.

In its issue of July, 1945, FACTS, a national magazine published in New York, carried an article by the State Board of Health's Publicity Specialist, in the form of a nationwide survey of advances made in the fight to eliminate pellagra, through good nutrition. This article recited and was based upon North Carolina's experience.



# The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

**This Bulletin will be sent free to any citizen of the State upon request**

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Vol. 61

JULY, 1946

No. 7



## NURSING STAFF

Consolidated Board of Health  
Wilmington, N. C.

Front row, sitting, left to right: Mrs. Highsmith, Miss Ezzell, Miss Munds, Mrs. Godfrey, Miss Johnson. Second row, standing: Nurse Spann, Nurse McIntire, Nurse Crawley, Nurse Richardson, Mrs. Hall, Mrs. Pieffer, Mrs. Tilden, Mrs. Meier, Mrs. Callihan, Miss Vanderwal, Miss Corbett, Mrs. Pitts, Mrs. Farr.

## MEMBERS OF THE NORTH CAROLINA STATE BOARD OF HEALTH

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 HAROLD J. MAGNUSON, M.D., Director, Reynolds Research Laboratory, Chapel Hill.  
 JOHN J. WRIGHT, M.D., Director, Field Epidemiological Study of Syphilis, Chapel Hill.

### FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

### SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters.)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

## The Public Health Nurse In Wilmington

**ANNOUNCER:** The following program is one of a series entitled "Your Health Department" and is brought to you under the guidance of the Health Department with the assistance of the Thalian Association.

This week, April 7-14, is Public Health Nurse's week all over the country. I am sure that at some time or other you've seen a public health nurse around your immediate neighborhood—that's right—she's the neat, attractive woman in a dark blue uniform carrying a little black bag. You know she is a public health nurse, but do you really know what this person contributes to your community? We knew you would be interested in hearing just what she does, and so in the studio today we have Miss Columbia Munds, supervisor of the public health nursing service in New Hanover County. Also from the Health Department we have three of our public health nurses, Miss Mary Corbett, Miss Rebecca Johnson, and Mrs. Jennie Glisson and a health education student who is going to ask the questions we would all like to hear answered.

**Student:** Miss Munds, just what is a public health nurse?

**Miss Munds:** A public health nurse, like the graduate nurses in hospitals and for private duty, is first, a graduate of an accredited hospital, registered in the state. In addition, she must have specialized training—for her job includes not only bedside nursing and

clinical work, but health education for the community at large. Isn't that so, Miss Corbett?

**Miss Corbett:** Yes, she will administer to a scarlet fever case, calm and reassure anxious mothers, or teach a child to brush his teeth with equal zeal. She and her fellow nurses work the year 'round, all over the county, serving the whole community. To many in the community, whose budgets only cover doctor's visits in extreme cases, she sometimes wears a halo.

**Student:** How many public health nurses have we in the whole country, Miss Corbett?

**Miss Corbett:** There are about 20,000—this means that we have one nurse for about every 6,000 people. To accomplish the most effective work, there should be one for every 2,000 people, so you can see that we have a long way to go before really adequate public health nursing service can be provided.

**Student:** What about New Hanover County, Miss Munds? How many nurses have we and what is the ratio here?

**Miss Munds:** We have seventeen, twelve on district service and five in our clinics.

**Student:** Let's see, that is approximately one nurse to every 4600 people. That means that we are quite a little ahead of the country at large, but we are still far from the ideal.

**Miss Munds:** After all, there is a shortage of nurses everywhere these

days. We feel that we are giving good nursing service and are very fortunate that we have so many well trained nurses to serve in our community.

Student: Miss Munds, how did the idea of a nursing service start?

Miss Munds: Care of the sick in their homes is as old as civilization itself. Don't you remember, in the Bible, St. Paul speaks of Phoebe who was "a succorer of many and myself also"? As far as I know, she is the first nurse whose name we know. Then, during the Middle Ages, the church was the source of most of the medical and nursing care. There were several sisterhoods whose special service to humanity was nursing. That is why we still have so many Roman Catholic hospitals which are staffed by nuns. However, as far as public health nursing is concerned, I think we may consider it a modern profession. It is only within the last hundred years that we have come to realize the responsibility of the state for the care of the sick poor.

Student: When was the nursing service in Wilmington started?

Miss Munds: In 1904, when a small group of persons realized the need for some nursing care among the sick poor. I don't believe they would mind my telling you that it was Mrs. Walter Parsley, Mr. Donald MacRae and Mr. Hugh MacRae who supported a nurse for three years. Then the women who formed the Ministering Circle and who had been interested in helping people who were old or sick or poor assumed responsibility for the nurse's salary. We are very proud of the fact that this nursing service has continued without interruption for forty-one years.

Student: You mean that there was no provision by the City and County authorities for any nursing service in the community?

Miss Munds: Not then. But in 1915 the Consolidated Board of Health employed a nurse to do the school work in the winter and infant care in the summer. The latter was a vital necessity because in those days milk production was not under the strict reg-

ulations that it is now and other sanitary conditions were not up to our present high standards. Hot weather meant a high death rate among infants because of intestinal ailments. About the same time, the Wilmington Chapter of the Red Cross being particularly interested in tuberculosis, supported a nurse who attended to tuberculosis patients. And by that time, the Ministering Circle was supporting two nurses, so that meant we had four nurses each with her own specialty. Since each of them worked all over the City, they found that there was a good deal of overlapping which always means waste effort. In order to correct this defect, the Wilmington Public Health Nursing Association was formed with four nurses and a supervisor.

Miss Corbett: And if, I'm not mistaken, I believe Miss Munds was the supervisor chosen, weren't you, Miss Munds?

Miss Munds: Yes, I was.

Miss Corbett: The City and County should be very grateful to Miss Munds for the excellent standard of public health nursing work that has been maintained for the past twenty-five years.

Miss Munds: I'd rather say, that the Association has had a board of lay and professional persons whose interest and support has been instrumental in bringing our work up to its present standard.

Student: I know that it is considered very fine by a recent survey made by the United States Public Health Service. Miss Munds, what is the present set-up of the public health nursing service?

Miss Munds: The Ministering Circle and the Community Chest, through the Wilmington Public Health Nursing Association, support three nurses. The New Hanover County TB and Health Association pays the salary of one nurse who does only tuberculosis control work, and City and County funds pay the salaries of the other nurses. As I told you, we have seventeen. The service is generalized. Which means each nurse takes care of all types of

patients in her district. We have divided the city and county into twelve districts, with a nurse assigned to each with five nurses doing clinic work only. Our generalized program takes care of any type of illness or care needed by the patient in the home. And we hold clinics in the health department, the hospitals and various community centers. The nurses also work in the schools. In fact, I think this is the place to stress the fact that the idea of the nursing service has changed since its first days. Or rather, I might say that there has been an enlarging of the program. When we began—we took care of the sick. Now, we take care of the sick but we also spend as much time as we can in teaching people how to stay healthy.

Student: How is that done, Miss Munds? Do you have regular classes or groups of people that you teach?

Miss Munds: At the present time, we have no classes going, although we have had them. The nurses do most of their teaching with individual families in the course of their daily rounds. I think I will let Miss Johnson tell you how she does it.

Miss Johnson: I can tell you best by telling you what I do in my own district.

Miss Corbett: I believe that will give our student the best idea she could have of what a public health nurse does these days.

Miss Johnson: Well, a great part of our work is infant welfare. I am given a list of every child born in my district and pay a call on the mother as soon as possible.

Student: You mean, **every** baby, without regard to the financial situation of the parents?

Miss Johnson: Yes. For instance, today I called on a mother with a new baby. She had just returned from the hospital and since it was her first child and she was a little nervous about bathing it, I showed her how. She felt a good bit more sure of herself when she knew that I was there at her elbow if she needed me. I gave her general

information on how to care for the baby and of course, told her that it should be taken to the doctor once a month until it was a year old.

Student: And do you go back again?

Miss Johnson: Yes, we try to make periodic visits on all infants under one year of age. Oh, and another thing we do is to advise the mother about immunizations. When to begin getting them and where.

Student: And where do they get them?

Miss Johnson: From their private physician, at the Health Department on Saturday mornings, or the well-baby conference.

Miss Munds: Immunization against smallpox, diphtheria, whooping cough, and measles is something the nurses talk all day long every day. It's a very important part of their pre-school work too.

Student: Do you do school work too, Miss Johnson?

Miss Johnson: Yes. My district includes Hemenway and Cornelius Harnett Schools.

Student: And what do you do—just be in the infirmary if someone happens to be sick?

Miss Johnson: No—don't forget about the preventive medicine side again. The teacher makes the health appraisals of her class, looking for colds, or rash, or any physical disability. The more serious ones she sends to me to follow-up. It's up to me to take it up with the parents and get them to correct it. For instance, if it is something which I think the orthopedic clinic could take care of, I inform the parents of the times when the clinic meets and arrange to get the child there.

Student: How often do they have that clinic, Miss Johnson?

Miss Johnson: The first Saturday in every month at James Walker Hospital. And if some special treatment is advised, like massage, we give the parents a demonstration of how it is done. And of course, we are always on the watch



in the schools for communicable diseases.

Student: Do you ask the parents to come to the school when you find a child who needs special treatment?

Miss Johnson: We try to get them to come, but if they can't, I go to see them at home.

Miss Munds: Nutrition is something else the nurses have to talk about constantly.

Miss Johnson: Yes, not all parents are alive to the fact that proper diet makes such a tremendous difference to a growing child. Children who don't have the proper foods certainly show it in their general health and their performance in school. And we advise them about taking children to the dentist. Just because the first teeth are shed, parents have a tendency to pay no attention to their condition. Actually it is as important to keep first teeth in good condition as it is to take care of permanent teeth.

Student: What about the actual nursing of patients? Do you do that also?

Miss Johnson: Bedside Care, you mean? Yes, where it is needed. We give bed baths and any treatment ordered by the doctor. Of course, we never give any treatment without a written order from the physician. Where there is a communicable disease in the house, we instruct the family about isolation and methods to be used for their own protection, and how to take care of the patient with the least amount of danger for the person who is to nurse him in the home.

Student: What about tuberculosis? Is there much of that in the county?

Miss Munds: We'll let Mrs. Glisson tell you about that. Mrs. Glisson is the nurse provided by the New Hanover County Tuberculosis and Health Association.

Student: Mrs. Glisson, recently I read a magazine article which said that tuberculosis is no longer a menace. If this is so, why should we have a special nurse in our county?

Mrs. Glisson: First I would like to make it clear that the nurses aim is first, the cure of the patient with Tuberculosis, and second, to prevent tuberculosis. I hope the day will come when we can safely say that tuberculosis is no longer a menace. We've been saying that smallpox was no longer a menace too—but look what has happened recently on the West Coast. Any communicable disease is a menace to the community. Tuberculosis isn't a sudden and dramatic disease—that is one of the difficulties in eradicating it. Often the patient cannot tell you where he got it or how long he has had it. That's part of my job, you know, trying to find out where the source of infection was.

Student: Well, how many cases have we in the county now?

Mrs. Glisson: Seventy-three, that we know of. And it is generally accepted that for each case we know of there are three that we don't know about.

Student: How do you go about finding such cases?

Mrs. Glisson: Through the tuberculin testing program in the schools. When we find a child reacting to the test, we know that he has been in contact with the germ. Then we investigate to see if we can find the household contact who is the source of infection. We also find cases through the chest X-ray clinic at the Health Department where all persons applying for a health permit are X-rayed as a routine part of the examination. We also X-ray all patients in the pre-natal clinic.

Student: Suppose you find a person with tuberculosis, Mrs. Glisson. Then what do you do?

Mrs. Glisson: We try to isolate that person immediately and see that they begin the treatments the physician orders. We also try to get all the household in for an X-ray. Here again we come to the preventative side of public health nursing. We are concerned with preventing the spread of that infection any further in the family, neighborhood or community.

Student: I'd like to hear something about the other clinics that are held too.

Miss Munds: I'm afraid we will have to wait until another day for that. Our time is almost up. But I want all our listeners to be sure and see the exhibit now in the Wilmington Furniture Co. window regarding our work.

Student: Well, I've learned a great deal about what a public health nurse does and I am grateful to you, Miss Munds for helping me.

Announcer: You have been listening to a program on the public health nursing activities in your community, presented under the guidance of your health department.

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### Miss Munds to Retire

New Hanover county is losing a valued official and the people a great friend in the retirement of Miss Columbia Munds which is to become effective on Monday. For twenty-seven years this faithful and admirable woman has directed public nursing under the Consolidated Board of Health—the first and only person to fill this important position.

Following graduation at Post Graduate in New York, Miss Munds took up her task as nurse supervisor here. In the intervening years New Hanover County has benefited, far beyond the knowledge of many old residents, in the thousand and one ways a competent nurse gives her services. Dr. A. H. Elliot, the county's health officer calls her a splendid leader.

Now, she says, she proposes to "just rest" for a while, without any definite plans for the future. Surely no one better deserves the privilege of resting. Everyone hopes that she will carry out her present intention, but we are doubtful if her rest period will be as long as her friends could wish.

It is an outstanding characteristic of people who have lived busy lives that they can endure just so much relaxation and no more. For her sake we could wish it might be different, but the probability is that Miss Munds will find means to resume her service to suffering humanity later on, and find her greatest happiness in so doing.

The Star extends its best wishes to Miss Munds, in retirement, with the same sincere interest it has always felt in her work.—Wilmington Star.

## Good Health

BY ALICE I. CRAWLEY, R.N.  
Consolidated Board of Health  
Wilmington, North Carolina

Good Health is desired by every man  
It is a part of God's Divine plan  
Sometimes when health we cannot  
claim,

We have only ourselves to blame.  
Preventive medicine today is our cry  
From certain diseases we should not die  
Our life span of three score years and  
ten

Can be lengthened or shortened by the  
acts of men.

We buy the things we do not need  
Medical advice we will not heed  
Yes . . . get property, luxury, and wealth  
But not at the expense of health.

Health is something that cannot be  
bought

This lesson to all should be taught  
Our greatest possession of all is health  
For as you know, health is wealth.

Be checked by the doctor yearly, my  
friend

You will find it cheaper in the end.

We are trying to eradicate disease  
So cooperate with us, won't you please?  
By keeping fit we can lend a hand

We can better serve our fellow-man

We can serve each other day by day

We can serve our God in no better way.

## Letters



At the University of North Carolina, Chapel Hill, N. C., December 7, 1939: Mr. M. F. Trice, Dr. T. F. Vestal, Dr. G. D. Dizon, Philippines, and Dr. A. V. Nasotir, Los Angeles.

1841 Azcarraga, Manila  
June 10, 1946

T. F. Vestal, M.D., Director  
Bureau of Tuberculosis Control  
State Board of Health  
Raleigh, North Carolina, U.S.A.  
My dear Dr. Vestal:

I have received your letter. My wife and I thank you very much for your concern over our well-being. At present, I am still working in the Section of Industrial Hygiene, Bureau of Health. We are enjoying good health, thanks to God.

Cost of living here in Manila now is ten times as much as that of pre-war days due to the ravages of war. We have shortage in rice, milk, clothing and believe it or not, even sugar, which we have to import from the U. S. instead of us exporting to you people there, before the war. We have been liberated for almost 1 year and 3 months now, and still prices of prime

commodities have not gone down yet due to lack of supply and big demands. Our economic structure has been entirely upset, entangled by the Japanese occupation; our farms are still uncultivated due to lack of farm machineries which the Japanese have commandeered from us; lack of seeds and work animals. The value of our money is still equivalent to two times that of your money, thus, our two pesos to a dollar of your money as before the war. One good frying chicken here costs us as much as ten pesos or five dollars in your money, so it costs us as much as five times to live in Manila as in Raleigh. You remember when we were with you, I used to tell you that it cost only one-third as much to live here in Manila as in Raleigh, and I was worried then when I was there, of the high-cost of living compared with ours, but now it is all the reverse.

Due to this high-cost of living, my wife and I had opened a store in the commercial district. We are doing little importing business and are selling American goods, such as shoes and clothing materials which my fellow friends in Washington have been sending me. It is only in this way that we are able to make both ends meet. If you know of any exporting company there that deals in printed cotton goods, I would like to have connection with it, especially if you could send me some samples together with their quotations. I would, indeed, appreciate your helping me in this connection. Cheap men's shoes of sizes from 5½ to 8 with width ranging from D, E and EE are salable articles here, specially those that will cost around \$3.00 to \$4.00.

Regarding our life during the Japanese occupation and after liberation, I am enclosing herewith a copy of my letter to Mr. Trice, from which you can have an idea of our hardships during those most trying moments in our lives.



Thanking you again for your letter and concern over us, we are sending you and Mrs. Vestal our most sincere regards and best wishes, I remain,

Very sincerely yours,

G. D. Dizon, Chief,  
Sec. of Industrial Hygiene

Commonwealth of the Philippines  
Dept. of Health and Public Welfare

BUREAU OF HEALTH  
MANILA

7 June 1946

Mr. Marion F. Trice  
419 Seventh Ave.  
North Nashville 3,  
Tenn., U.S.A.

Dear Mr. and Mrs. Trice:

I have read with utmost delight your letter and highly appreciate your kind concern for our fate in the last war. Two days before the start of the war in 1941, I sent you a letter which presumably did not reach you. It has not been returned to me so probably it was destroyed in the post-office. At the start of the hostilities, (as you must have read in the Harvard Public Health Alumni Bulletin, published in November, 1945) my family and I went to the province and then about December 30, 1941 when the Americans were already entrenched in Bataan, we went to the mountains of that province and stayed there for about two or three weeks. As you can imagine, in the mountains we did not have enough food supplies and we took our water from a stream where four thousand refugees got their water for drinking, cooking, washing and bathing purposes. I had to boil our water and utensils each time we had to use them. Firewood became so scarce in spite of the forest nearby that sometimes, it took me two hours to gather a bundle for fuel. I had some calcium hydrochlorite and emergency medicine in my bag, but inasmuch as we were living with a group of about ten families, it was consumed in a short time. I had to organized certain sections of our group to improvise latrines for the dis-

posal of all wastes. But there were more than three thousand people living in the vicinity of the mountains, so we could hardly enforce the rules of sanitation. Then cases of dysentery and typhoid broke out and when I thought it would be an epidemic, we came down from the mountains walking, with my family bound for the lowlands. I left my car in the mountains because we had to take the trails instead of the roads, as most of the paths were blocked and guarded by Japanese. After two days, we reached the Central Luzon plain and we stayed in the town, where my farm was located, for about three months. Then the guerrillas started their work of sabotaging Japanese installations and capturing and killing Jap patrols. On account of this, the Japanese made a proclamation to the effect that for every one Japanese national killed, they would get 10 prominent citizens in the locality and hold them responsible for the culprits who did the crime. Almost every night, guerrillas would come to town and do some patrol work and then the next day Japanese would come and ask the town people to show the hideouts of the guerrillas.

Such was our life in the country at the first part of 1942; we were between the Japanese and the guerrillas. Then we decided to go to Manila which was at that time considered the only place safe. I have two children, a wife and her aunt to take care of, and much as I desired to join the guerrillas, I could not leave my family behind with no one to look after them. Thus we passed the three years of Japanese in Manila.

A puppet government under the Japanese was organized and nearly all responsible employees in the government were called back to work. Refusal to work under the Japanese was construed as resisting them and in many cases resulted in investigations and arrests. Under the circumstances, I had to go back to work although I did not do active work as almost all industrial

establishments were either sealed or taken over by the Japanese and run by them.

I remember way back in 1943, when several Filipino laborers were ordered by the Japs to go inside the underground gasoline tank (which the U. S. Navy constructed at the U. S. Naval Base at Cavite) to clean it. There had been cases of benzol poisoning among these laborers. I have seen personally several cases of those affected and those who died in our hospital. A Japanese Naval Medical Officer went to our Institute of Hygiene and asked for an industrial hygienist to help them. It was fortunate that the man asked was my friend and a graduate of the Massachusetts Institute of Technology. He told the officer he did not know anyone at that time who could handle the job. There were so many affected with the benzol vapor that many of the laborers escaped from the place and never returned to work again. I investigated those whom I came in contact with and performed an autopsy on one who died in our hospital. During the liberation by the Americans, I lost all my data and papers about those cases. The three cases we sent to the hospital had complete mental derangement so much so, that our psychiatrist thought it at first to be cases of mental disease, before I told him the history.

During the Japanese occupation, we were prohibited to use short-wave radio. Many were killed when caught using the same. I was fortunate, however, that I have about five friends who were members of the guerrillas and who were able to setup a complete underground radio receiver. Thus we have always been informed throughout the three years of Japanese occupation of the world events especially regarding the activities of the United States forces in the Southwest Pacific. Unfortunately two of the members of my group were caught. One of them, Dr. M. Olimpia a colonel in the Philippine Army and who studied medicine in

Japan and spoke Japanese fluently was caught in 1944. He was imprisoned in the famous torture chamber of Fort Santiago and killed afterwards. The other, Dr. Trinidad who as the Administrative Officer of the Philippine Anti-Tuberculosis Society, was also taken one day by the Japanese and we never saw him again. It was a good thing that both doctors were brave and did not squeal the names of the others. I had to hide myself for a while, when I learned of the arrest of Dr. Olimpia because he was one of our group who used to listen to news brought through our shortwave receiver. When we get the news from our informant, we pass it to other friends who we know are loyal to the United States, so that they may be informed of the real situation. Thus we kept their morale high and not influenced by the Japanese propaganda.

On October 21, 1944, the first American landing took place in Leyte. Then a few days later, the memorable and decisive naval battle east of the Philippines took place. During that battle, it took almost the whole Japanese Navy to combat the 5th and 3rd task fleet of the U. S. Of that battle we were able to receive complete report of the result. The Japanese broadcasted a propaganda of their own, invariably saying that the U. S. Navy had been completely annihilated. They even sent radio cars with loud speakers traveling around Manila, reporting their supposed victory. We had to counteract this and broadcast the actual facts to our friends. Many of us Filipinos believed in the strength and ultimate victory of Uncle Sam, although there were those who became impatient waiting MacArthur's promise, "I shall return." It was to those people that we had to add strength and support their morale. We could not blame them. Imagine, three and a half long years of waiting while we were starving, sick, oppressed, tortured and even killed by our conquerors. Our people have lived under

the principles of democracy. They have lived 40 years as free men under America; free to speak and express their feelings and opinions. Then all in a sudden, came the Japanese who suppressed all our civil liberties. They even regimented our private lives and thoughts. One lived in constant fear that your own neighbor or best friend might have turned a Japanese spy and you were afraid to converse with him freely.

Then on February 5 at about 5 o'clock in the afternoon, America's first cavalry entered Manila and liberated all the American prisoners at Sto. Tomas University, which was made a war prisoner's camp. We were then living at the heart of the commercial district of Manila just a hundred yards from the "Bilibid Prison" which was another war prisoners' camp. The Americans took this over with tanks, bazookas, trench mortars, etc. The firing line was the wide and principal street in front of this compound. We were on the other side of this street in the Japanese held section. That was Saturday, February 5, 1945. The U. S. Army attacked during day with infantry and then withdrew three blocks below during night. The Japs in turn would begin their sniping and their machine guns and small artillery would begin to work. There were about 3 concrete pill boxes in our vicinity, the closest was only a block away. The whole night of February 5, we laid down in our improvised shelter, while big fires in the city were started by the Japs. The Japs began a deliberate mass murder and destruction of our capital, Manila. They entrenched themselves in all concrete buildings for street fighting. They planted dynamite and bombs in all private houses they have forcibly acquired from our people. When the fires reached these places, there would be big explosions. Everything looked like hell to us. We could not run and seek a safe place, for the fighting and sniping was in the street separating us from the Amer-

icans. We had just to lie flat in our ground floor (houses in the Philippines do not have cellars) barricaded with sand bags, suit cases filled with clothes, sacks of rice, tables, or anything we could get hold of. Early Sunday morning, that was February 6, there was a lull in the fighting, for the Jap garrison in our vicinity escaped during the night and retreated to a new position near the river. That morning, we attempted to cross the fighting line towards the American side. Everything was ready, I had a push cart which I had prepared for that occasion since 1942. I placed there our personal belongings, food and water. We were decided to cross the street. Many others who started early were able to cross for the Japs sentinels in the street had disappeared. But when we were about to cross, we saw several American big tanks coming toward us. The Jap snipers in the concrete buildings near us started to fire and we had to retreat. We went back to our house. During all that day and night, sporadic firing occurred. The trench mortars were constantly firing above our place. I knew they were firing at a target about 300 yards behind us, where the Japs took new positions. Several shells exploded in our vicinity. Three persons, (one a boy) were hit among my neighbors. I was asked to attend him, which I did at the height of the firing. I extracted shrapnels from his legs and gave him first aid. That boy is still living, thanks to God. The other two I lost tract of them after liberation. Then on February 7, Monday, the Americans advanced toward our side. They were the first Americans I ever saw since the Japs took us over. We have seen from smuggled pictures, their new uniforms during the Jap occupation, but that was the first time we saw them walking in the streets with their new and different helmets. The first group I saw were tank supporters. I went to the alley to see them in the main street, but we could not come near them for fear they might mistake us for Japs. Then more Americans



came, all of them very tired, nonchalant and with long beards. All of the groups were guided by Filipino guerrillas. Then a group guided by Lt. Laconico, a fellow whom I knew, passed near us. I shouted to him. He recognized me but he advised me to stay where I was, for there were many snipers around. Then all of a sudden, a Jap machine gun burst and we had to run to our "holes." We waited again until it was all quiet. A group of GIs went to our place and asked for everybody to come out. They were all too tired to speak. We gave them whiskey, and began talking with them. Later I found out that those GIs were all veterans of Leyte campaign who would not mistake a Filipino for a Jap. Those were infantry men, husky, tall, long-bearded and rough in their manners. They were old, not young boys, and they were the most "tough guys" I ever saw here or in the States.

At that time the fire raged all over Manila, coupled with strong explosions of the Jap's dynamite. The fire was only one block from our house, that was 2 o'clock in the afternoon of February 7. We packed our things again and led my family to the other side of the street towards the Americans. My wife, my children and everybody else in the vicinity marched on to safety. I returned again about 6 o'clock to get another load of our belongings. We passed the streets strewn with dead Japs. Then by night time, all the GIs retired three blocks back and the Japs begun their nightly sniping again. Our house was burned about 8 o'clock that night. Except for a few clothes, mat, sheets, pillows and blankets, which we were able to cart away, we lost everything. But the thing I felt most to have lost, were the two dozen duck eggs which my wife forgot to put into our push cart. I bought them at two hundred pesos (Jap military notes) each. We were hungry, tired, sleepy, and we were still in the street (of the American side) watching our house burn. Then at about 10 o'clock, we were able to

reach the house of my wife's brother. We crawled into the ground floor of their house to find them. They had to seek shelter too, for their house was just at the back of the Sto. Tomas University where the American internees were liberated. They gave us food and we stayed all night camped again in their garage with about thirty other persons with us. That whole night, Jap trench mortar shells, anti-aircraft fires were exploding in their yards. Here and there, we could hear screams. Many were hit in the sporadic shelling of Sto. Tomas University. Next day, there was a lull and we were able to go out of our shelter to get water. But there was no more water. Water pipes had been cut. People opened the main below the sewerage tunnels, for there was yet water in low levels. We took that water and used it for drinking. It was not sewerage water, but in our City, there are water pipes running inside the sewerage tunnels. Those pipes were above the sewerage level. Americans and our health workers distributed water. The Army busied itself establishing dispensaries, water points, fighting fires, digging latrines, bringing in food, etc. You have been in the army and still I doubt, if you have seen such chaos as I have seen it. I have not been in the army, but I have stayed between two enemy fire for almost three days.

When more shelling came from the Japanese, new acquired positions, we moved to San Lazaro Hospital, a hospital of the Bureau of Health for contagious diseases. That was the only hospital left undestroyed. We stayed with a doctor friend of mine who was a resident there. Then the other side of the city beyond the river that divided it into two which we call "Southside" was made the last stronghold of the Japs. There, the Japs began to massacre Filipinos. They would round them up or go to a place where people were gathered, and threw hand-grenades or shot them or stabbed them with their sabers and bayonets. Filipinos

went into air-raid shelters. Japs went after them. They sealed the openings and threw grenades. They shot at women who tried to fetch water for their men folks who had been holed up in their shelters for days. The beautiful were herded to the Japs hide-outs and there raped and killed as the sex maniacs have had their fill. Sometimes, whole families were wiped out with a single machine gun burst.

During all those times we spent many a sleepless night, with the whines of artillery fire above and the burst of Japs shells in our neighborhood. The Japs had to use their anti-aircraft guns for field artillery because they had no more field artillery guns.

It took almost two weeks before the whole southern district of Manila was fully retaken by the American forces. After the smoke and dust had settled among the rubbles, I went across the Pasig river to see what could be done for the unfortunates who had been caught within the besieged area. As I crossed the pontoon bridge built by the American armies, I was met by a pitiful sight. The refugees from the battle-scarred southern side of the city were beginning to cross the river seeking for a place of safety. Mothers who could hardly walk with their clothes drenched with blood, clasped their wounded babies, who were more dead than alive. The wounded who were still able to walk struggled across the bridge, while the more seriously wounded were carried in make-shift stretchers by their more fortunate companions who survived the massacre without a scratch.

I could hardly recognize the south-side of the city which used to be the

most beautiful part of the Metropolis. Almost all the buildings were razed to the ground. Everything was but a heap of ashes and rubbles. The air was beginning to stink with the odor of the decaying corpses. Dogs and cats that had survived were having their feast of blotted cadavers.

Thus ended the bloody battle for the liberation of Manila, the only remaining bastion of Democracy in the Far East. Immediately after its liberation, a new Manila began to be born out of the rubble and rubbish. Makeshift dwellings sprung like the proverbial mushrooms overnight. People began to salvage galvanized iron roofing while it was still hot from the fire, and with other materials from the ruins, they began to build their future homes. Manila, the Pearl of the Orient—looked like a shanty town.

Gradually, the government agencies began to reorganize, the Bureau of Health being one of the first to begin its work. Medical officers were assigned to hospital wards and I was one of them. We were at first paid by the PCAU but later on, our government took over.

Here I am now, working again in the Bureau of Health as Chief of the Section of Industrial Hygiene. But I had to open a small business of import and export of our own to meet the high cost of living now existing in Manila. I hope I can tell you some more, when I write to you in the future, but in the meantime, let me hear from you again.

With my best regards and sincere wishes, I am

Very sincerely yours,

G. D. Dizon, Chief  
Sec. of Industrial Hygiene

## Dr. Milton J. Rosenau

"The death of Dr. Milton J. Rosenau, dean of the School of Public Health of the University of North Carolina, on April 9th was a great loss to the state and to the nation. A news note from the University in this issue outlines Dr. Rosenau's achievements, which need not be recounted here. No single accomplishment of this remarkable man is apt to be remembered longer—in North Carolina, at least—than his guiding the School of Public Health at our State University into its commanding position as one of the greatest in the country.

"A lesson to be learned from the life of Dr. Rosenau is the folly of applying a rigid retirement policy to all alike. Dr. Rosenau was forced to give up his position as director of Harvard's School of Public Health in 1935 because he had reached the age at which all Harvard professors are retired. Since the University of North Carolina is not so rigid in its policy, he was invited there to organize its School of Public Health. To this school he gave ten of the best years of his life—the last ten. Truly, Harvard's loss was North Carolina's gain.

"The psychologists have evolved satisfactory tests for evaluating the intelligence and the aptitude of students. Why can they not perfect a test for mental alertness and flexibility which will show whether a man is fit to carry on his work beyond the retirement age? Such men as Justice Oliver Wendell Holmes in the law, Generals Marshall and MacArthur and Admiral Halsey in our armed forces, and Dr. Rosenau in medicine have proved beyond question that some intellects are merely made keener by the accumulation of years which would bring senility to less well integrated personalities."\*

One of the most effective appraisals of Doctor Rosenau that has appeared

in print is in the form of an editorial in the May issue of the American Journal of Public Health, to which your attention now is directed:

"Milton J. Rosenau, President-Elect of our Association, was born in Philadelphia in 1869 and died at Chapel Hill at the age of 77, on April 9, last.

"Dr. Rosenau took his medical degree at the University of Pennsylvania in 1889, and pursued his postgraduate studies in Berlin, Paris, and Vienna. His professional life was divided into three successive phases.

"From 1890 to 1909, he served in the United States Public Health Service and for the last ten years of that time was Director of the Hygiene Laboratory. This Laboratory, which is now the National Institute of Health, owes its impetus and its high scientific standards largely to 'M.J.' The writer of this editorial happened to be a member of an advisory group under the Chairmanship of W. H. Welch, and heard Dr. Welch tell the then Secretary of the Treasury that there was no research institution in the world which was making a greater total contribution to medical knowledge than this United States Public Health Service Laboratory. Rosenau's own research on the standardization of tetanus and diphtheria antitoxin, on vaccine virus, his contributions to our knowledge of anaphylaxis, his studies on milk sanitation and milk pasteurization, and on the epidemiology of typhoid fever and acute respiratory infections was of a high order.

"In 1909 Rosenau began the second major phase of his career as Professor of Preventive Medicine and Hygiene at Harvard where he continued to serve until 1935. Between 1913 and 1922, he, with W. T. Sedgwick and G. C. Whipple, directed the pioneer Harvard-Technology School for Health Officers; and between 1922 and 1935 he was Professor of Epidemiology in the Harvard

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\* Editorial — North Carolina Medical Journal.



School of Public Health. For seven years (1914-1921) he served also as Chief of the Division of Biologic Laboratories of the Massachusetts State Board of Health.

"While in Washington Rosenau had published a book on **Disinfection and Disinfectants** (1901). At Harvard he made an important contribution in a work on **The Milk Question** (1912). A year later, in 1913, came his **magnum opus**, **Preventive Medicine and Hygiene**, which has remained not only the standard textbook in this field but one of the best examples of an ideal textbook in any area related to medicine. Its last (6th) edition was published in 1935. Dr. Rosenau received the Gold Medal of American Medicine for Service to humanity in 1912 to 1913, and the Sedgwick Memorial medal of our Association in 1934.

"Here was what seemed a full and successful life. Dr. Rosenau retired from Harvard at the age of 66. He seemed broken in health and suffered from tragic bereavements. Then a miracle happened; and instead of resting on his laurels, he began a third wholly new phase of his career. He recovered his health and took the post of Professor of Epidemiology at the University of North Carolina. In the delightful environment of Chapel Hill he built up a new School of Public Health, now recognized as one of the accredited schools of our Association, and the pioneer institution of its kind in the Southeast. He was constructively active to the very end of his long life. Less than three months ago he went to Puerto Rico to represent the A.P.H.A. at the meeting of the Puerto Rico Public Health Association; and, even after his first heart attack in March, he took an active part in the Institute for Health Officers at Chapel Hill, jointly sponsored by the University and the A.P.H.A.

"Dr. Rosenau's youthful vigor of spirit and his soundness of judgment will always live on with us who knew him as an inspiration. His erect, military carriage and his sardonic comments emitted with a piercing glance from heavy-lidded eyes might have been forbidding in another man—and indeed no one took liberties with M. J. But his winning smile prevented any sting; and he was the soul of kindness, always ready to go out of his way to help a pupil, a colleague, or a friend. Taking into account, not only his teaching for 35 years at two universities, but also his book on **Preventive Medicine and Hygiene** to which we all refer in time of need, it is probable that no single individual has ever taught so many public health workers so much as has M. J. Rosenau."

#### **Resolution on the Death of Dr. Milton J. Rosenau**

Be it resolved by the North Carolina Academy of Public Health:

That we express our deep regret at the passing of Dr. Milton J. Rosenau, a charter member of this Academy; the world's leading authority on preventive medicine, and first dean of the North Carolina School of Public Health at Chapel Hill.

In the death of this eminent medical scientist, who devoted his life to the alleviation of human suffering, the Academy of Public Health, the State and the Nation have experienced a distinct loss. We rejoice in the fact that, although he has laid down the working tools of life in the flesh, his accomplishments live for us to enjoy and, above all, to utilize for the benefit of humanity.

Be it further resolved:

That we express our sympathy to Mrs. Rosenau and, through her, to others near and dear to the deceased.

Unanimously adopted on this, the 20th day of May, 1946.

# How to Avoid the Dangers of Extreme Heat

Public Health is chiefly concerned with prevention, an ounce of which is reputed to be worth a pound of cure, that is, is used to be, but the ratio may have undergone some change, in keeping with the trend of the times. At any rate, prevention of sickness continues to be very important, and we know that preventive measures have been highly successful in combating many diseases which attacked humanity with such disastrous effects for centuries.

It is always desirable to discuss a timely, or seasonal subject. If there appeared to be approaching an epidemic of any kind, you would be given information on how to avoid that particular disease; how to prevent having it. Once you contacted it, that would be a matter between you and your family physician.

No matter what forecasts the weather man may make from day to day, we have entered into a long, hot season—one that calls for outdoor pleasure and, at the same time, involves certain dangers to you. This article is devoted to a discussion of how to avoid some of these dangers. This is what was earlier referred to as a seasonal discussion, and it is hoped that you will read it carefully.

## Swimming Hazards

Swimming is a sport that has always been a favorite summer pastime. It can be healthful, invigorating, and thoroughly enjoyable. And yet, it may be attended by dangers. Some of these dangers do not exist in the surf or large bodies of water, but those who patronize artificial swimming pools, many of which are found in our cities, should make sure that these pools are properly controlled and made to conform to the rules of sanitation, as they may be the breeding places of infectious diseases. There should, according to public health authorities, be a constant

and uninterrupted flow of chlorine, which, unless kept constant, performs its function and is gone. The water in the pool should be examined daily, for bacterial content, and the pool that does not meet these requirements is dangerous and should not be patronized. Polluted water in a swimming pool, which almost invariably is taken into the mouth by the swimmer, is extremely dangerous—and one swallow may make a summer of misery.

Now, let us consider the hazards involved by over-exposure to the sun.

Burns may result from direct contact with fire, steam, chemical, or over-exposure to the ultra-violet rays of the sun. In any event, the result is the same, regardless of the inflicting agent.

There are three degrees of burns:

First degree burns, which redden the skin, without blistering.

Second degree burns, which result in blisters.

Third degree burns, which injure or destroy the tissues.

## Over-Exposure to Sun

Over-exposure to the sun may result in burns of any one of the three degrees named above, depending upon several factors, including length of exposure, or the skin of the person exposed. A brunette, according to medical authority, can undergo a longer period of exposure, without harmful results, than a blond. But, in any event, those who have been conditioned to sunlight are in a better position to stand exposure than those who have not. It is, therefore, best to go in swimming before 10 o'clock in the morning, and after 4 o'clock in the afternoon. In no case, however, should exposure be too prolonged; and, certainly, those who are not conditioned to the sun's rays should not lie on the bank or beach for an extended period.



# The Health Bulletin

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AUGUST, 1946

No. 8



**IT PAID OFF**—This farm fish pond is only 7/10ths of an acre large, and is dependent entirely upon surface run-off for its water, but within a year it provided nice bass fishing. It cost \$240 to build, but in the first year paid its own way by providing water for spraying an orchard and watering 5,000 chickens during a sever drought. It is located in Wake County, N. C., which already has 60 such farm ponds.



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### FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

### SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters.)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

## Making The Fish Pond Safe For Health

By D. F. ASHTON, Entomologist

N. C. State Board of Health

There has been a tremendous increase in the number of ponds being built in North Carolina in the past six months. Few people seem to be aware of the regulation of the N. C. State Board of Health governing pond construction and do not know that a permit is required for every pond built in the state that is over  $\frac{1}{4}$  acre in area. The majority of the ponds now being built are between  $\frac{1}{4}$  and  $2\frac{1}{2}$  acres.

The purpose of this regulation is to keep malaria mosquito-breeding areas at a minimum. This, however, does not mean that the health authorities are opposed to the construction of fish ponds, but they are opposed to ponds which produce millions of mosquitoes.

Contrary to the belief of many people, it is not necessary to have trees and brush in a pond to provide shade and protection for fish. When a pond is properly cared for; that is, fertilized at regular intervals and has been stocked with a proper balance of fish, these things are taken care of naturally. The fertilizer increases the growth of microscopic plants which provide shade and food for fish and the animals the fish feed on, also the bream on which bass feed increase in such large numbers that they need no protection. A properly stocked and fertilized pond will begin producing in one year and will yield from three hundred to five hundred pounds of fish to the acre per year.

When building a pond, it is desirable, from the fish production standpoint, to have as much water as possible of suitable depth. Water which is less than one foot deep is not suitable for fish production and is therefore wasted. It is, therefore, advantageous to pick a pond site where little or no shallow water will exist or to build the pond, making all water deep. When using heavy machinery, it is possible to build a steep shoreline with very little, if any more, expense. By having a steep shoreline, the shallow water in which grass will grow is reduced to a minimum, thus making it possible for the fish to get all mosquito larvae which happen to get into the pond. It is also possible in a short while to pull all grass and rushes growing in this shallow area.

For the protection of the pond, a pipe should be placed under the dam so that it can be drained easily or so that the head of water may be reduced. This pipe should be large enough to carry the normal flow of water which comes into the pond. Spillways are provided to carry the flood waters. Two types of pipe are in general use, terra cotta, and steel. The most desirable is steel because it will not break when the heavy machinery, which is used to build the dam, runs over it. This pipe which goes under the dam is provided with an elbow and an upright pipe is fastened to this which extends to the desired level of the pond water. By

angling this upright pipe, it is possible to regulate the level of the water in the pond or to drain it. By using the elbow and upright pipe, the necessity for using an expensive valve is eliminated. At times it becomes necessary to repair the dam or clean the shoreline and if no drain is provided, this is impossible. It is also necessary at long intervals to change the balance of fish in the pond. Undesirable fish may have gotten into the pond, or the balance of fish may be wrong. This bottom drain provides the opportunity to drain the pond or control the water level and is a most desired part of all ponds.

It is desirable when selecting a pond site to select one which is not located on a large stream or in a ravine which carries drainage from large areas of land.

The most suitable site is in a pasture or sodded area which has a small spring located near the head of the proposed pond. If the spring is not available, 25 or 30 acres of land draining through a meadow strip provides sufficient clear water to maintain a good one-acre pond.

It is not practical to have a pond over one or two acres in size, if it is to be a fish pond. Ponds over two acres will not be attended to properly and the expense of fertilizing is great.

The requirements of the N. C. State

Board of Health in light of the previous statements are not, therefore, detrimental to a fish pond; in fact, one who builds and incorporates the requirements into his pond has a better and a trouble-free pond.

These requirements are as follows:

1. All vegetation, trees, brush, and grass, which is not covered at all times by at least one foot of water shall be removed.

2. The shoreline shall be made as steep as possible, a two-to-one slope, 30°, is sufficient. This should be extended all around the pond, even in the upper end where it should reach a depth of 18 inches or two feet, as soon as possible.

3. There shall be a drain pipe under the dam which shall be placed at the lowest point so that all water can be removed from the pond and a suitable device shall be provided so that the water level can be fluctuated, if desired.

4. Any area covered by water which has grass piercing the surface in which malaria mosquitoes are breeding shall be oiled every ten days throughout the mosquito-breeding season with No. 2 fuel oil.

Applications for permits may be secured from the County Health Officer, the Soil Conservationist in the county, or by writing to the N. C. State Board of Health, Malaria Control Unit.

## Death Comes Later

By C. P. STEVICK, M.D.

Acting Director of Division of  
Epidemiology and Vital Statistics

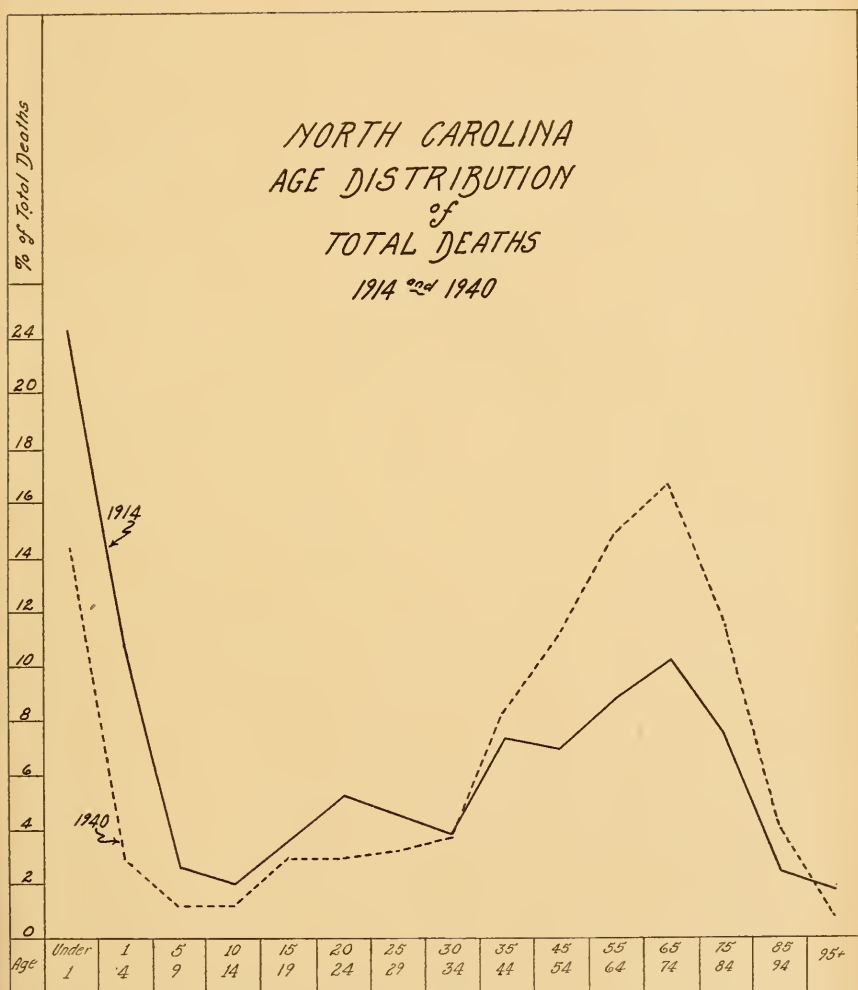
As the health of North Carolina's population has steadily improved through the years, an interesting change has taken place in the age at which people reach the end of their life span.

The earliest information available

about the age at death of North Carolina's population is the year 1914. For comparison the year 1940 is used here. The age distribution of the total deaths occurring in those two different periods is shown in Figure I. It can be seen that deaths in infancy and childhood



FIG. I



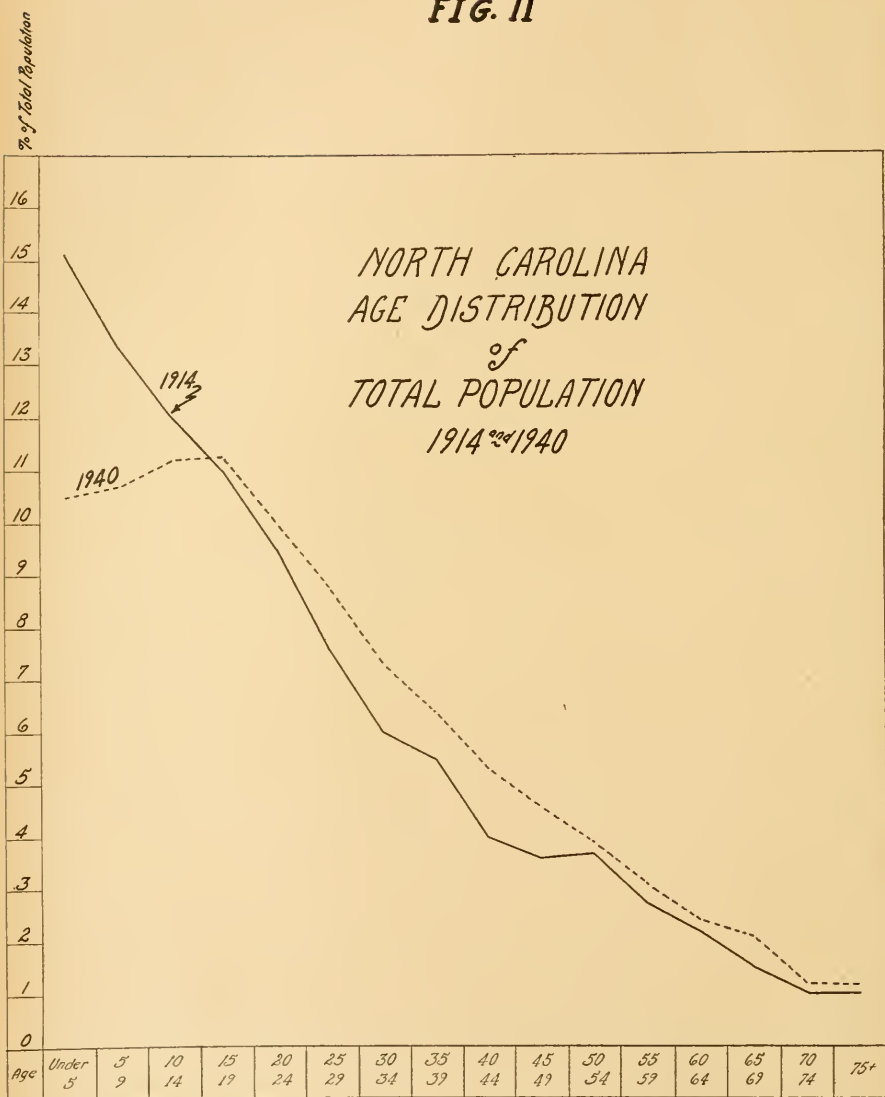
now make up a smaller part of the total than formerly, while the percentage of deaths in the older age groups has grown steadily larger in recent years. In other words, death comes later in life now than it used to.

This shift in the age at which death takes place has been accompanied by a marked reduction in the total number

of deaths per 100,000 people. In 1914 there were 12.4 deaths for every 1,000 of the population while in 1940 there were only 8.8 deaths for this same number of people.

This reduction in the death rate has benefited all ages to a considerable extent but has been much more pronounced in infancy and childhood.

FIG. II



The individuals that are protected from death in their youth will, of course, later increase the number of older people in our population. The result of this simple fact is that with a constant or declining birth rate the population of North Carolina is steadily increasing its content of elderly people.

In Figure II is shown the change that has taken place between 1914 and 1940 in the age of the state's population. In 1914 twenty-five per cent of our people were over thirty-five years of age. In the last few years this figure has increased to 30 per cent.

As the preventive and curative meas-

ures to combat disease become more efficient and more widely available to the population, it is certain that a still further reduction in the total death rate will occur. No one, even in this atomic era, however, has been optimistic enough to predict that eventually death will be postponed permanently. The most we can hope to achieve, therefore, is the reduction of all preventable deaths to zero and thereby to increase still more everyone's chance to live to a ripe old age.

The most important reduction in the preventable causes of death that has occurred to date is that in infants under one year of age. In 1914 there were ninety deaths under one year for every 1,000 births. In 1940 this figure had been reduced to fifty-three by the improvement in the standard of living and the quality of preventive and curative medical care available in North Carolina.

The largest single item in the decline of the preventable deaths of early childhood has been the reduction in diarrhea in children under five years of age. In 1914, 7.1 per cent of all deaths of all ages were due to infantile diarrhea. In 1940 only 1.7 per cent of all deaths were due to this cause.

While it is certain that still more lives in this age group can be saved, there is a group of more or less non-preventable conditions that will presumably always cause the loss of a certain number of infants shortly after birth and will probably continue to be responsible for a larger number of deaths in the first year of life than in the other periods of childhood. The most important of these causes are congenital defects and related conditions. Nature tends to create life in great quantity rather than with high quality so that defects at birth of rather severe nature are more common than we would prefer. There has been no reduction through the years in the infant death rate due to these causes. In 1914 congenital debility and malformations were responsible for 18 deaths for every 1,000

births. In 1940 this number stood at 21 deaths per 1,000 births.

As preventable diseases are overcome more and more successfully for all age groups in the years to come, it is obvious that in older persons the causes of death that are non-preventable will be responsible for a steadily increasing percentage of all of the deaths that do occur. In 1914, 1.3 per cent of all deaths resulted from heart diseases in the age group 55 to 64. In 1940 the deaths at this age amounted to 4.1 per cent of all deaths that occurred.

Most heart disease at this age is today thought of as non-preventable. Should this situation change and deaths from heart disease become few in number, then some other disease that was non-preventable would become the leading cause of death in the older age groups. Cerebral hemorrhage, nephritis, and cancer are other leading causes of death between 55 and 65 years of age. The first are closely related to heart disease and, for the present, are classed as essentially non-preventable; however, there is definite hope for a sizable reduction in cancer deaths.

The rising toll of heart disease deaths, therefore, need not cause undue alarm at this time since the increase is for the most part due to a saving in deaths in the younger ages.

The eventual result of these constant changes in the pattern of life and death is impossible to foresee in much detail; however, the immediate result will be that children born without serious defects will have a greatly increased chance to live to a ripe old age. What that age will be is a more difficult question to answer. As is shown in Figure I, there has been little change since 1914 in the age at which the highest percentage of deaths in elderly people occur. This has remained practically constant at approximately 70 years.

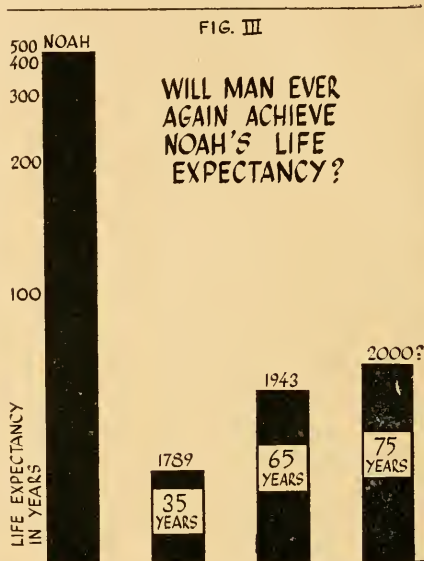
The fact that up to the present time there has been no appreciable increase in the maximum age to which human



beings may live will very shortly constitute a ceiling beyond which our life expectancy at birth will not extend unless active counter measures are directed toward the degenerative diseases of this age group. Gains have been spectacular in combatting diseases affecting persons under 30 years of age, but the disease of middle and old age still constitute a challenge to all fields of medical science. About 160 years ago the life expectancy of each new born child was only 35 years. In 1943 white male infants had a life expectancy of 63 years. This represents an increase in life expectancy of about 10 years for every fifty-year period that has elapsed since 1790. If no new developments occur in the science of nutrition and the other factors affecting the durability of the human body, the next one hundred years may not extend our life expectancy at birth much beyond the age of 75 years.

New scientific advances are easily possible, however, and a life expectancy of hundreds of years, as is said to have

been the case in Noah's day, may not appear so impossible to attain when compared, as in Figure III, with the average life span of recent times.



## A Servant of All

BY GLENNIS (BURRIS) HUGHES  
Route 2, Marshall, N. C.

The Bible says, "he that would be greatest among you, let him be servant of all." Mrs. Annie Burris of Madison, County, North Carolina had no idea of becoming great; but in the hearts of her children and hosts of friends, she is considered great because of her work of love.

For more than forty years she has been answering calls of persons needing her assistance in bringing children into the world. She has gone to homes all over this county and to many homes in Buncombe, in all kinds of weather; and often times when she was hardly able to sit up. She went to one of her closest neighbors when she was so ill she had to be carried in a chair by her sons. She has gone so far up in the mountains, that she had to ride a mile

or so on horseback after going a good distance in a car.

She has not done this work just for the money she gets for it; for she received only \$5.00 for the greater number of years and only for the past two years has she gotten \$10.00. There are some who do not appreciate her enough to pay her anything. However, these are not many; and they are not appreciative of any of the good things of life.

This good servant is now past sixty-six years of age and is really not able to do this kind of work; but she still cannot refuse to go when called upon. I am sure that she has laid up many treasures in heaven; for Jesus says, "Inasmuch as ye have done it (good works) unto one of the least of these, my brethren, ye have done it unto me."

# Food Handlers School Pro and Con

*By*

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## Introduction

In the May, 1945, issue of this bulletin, Dr. Robert K. Oliver and Mr. Morris Ostrolenk reported the results of a consumers food handlers' school. The course of instruction was conducted for approximately 250 high school students and their teachers in the belief that certain vital information could be obtained relative to the value of the lectures and demonstrations presented. Because the listeners were consumers, rather than producers or dispensers of foods, the subject matter was presented from the consumer's point of view. Thus it was possible to determine consumer interest in environmental restaurant sanitation. Having availed themselves of the mature judgments and the semi-interest in science of these high school students, the authors concluded that a minimum of four one-hour lectures and demonstrations were essential for the presentation of the material under discussion. It was further concluded that lectures and demonstrations dealing with bacteriology, communicable diseases, medical zoology, sanitation and food handling, and personal hygiene were sufficiently inter-related as to merit the minimum amount of instruction necessary for restaurant operators and their employees. Although the greatest amount of interest of the student body was manifested in two of the four lectures, that particular enthusiasm could readily be explained on the basis of their personal scientific leanings.

## Further Study and Investigation

Because the subject of food handlers'

schools continues to present many conflicting opinions, it was deemed advisable to expand the investigation. To this end the New Hanover County Health Department undertook a controlled course of instruction. It was intended that a complete course consisting of four one-hour lectures be presented to the owners and employees of one or two of the best restaurants for the specific purpose of soliciting from them the merits or demerits of the program. It was considered advisable to secure the reaction of managers and employees of some of the highest class restaurants to such a course before attempting to present it to those in which conditions were likely to be less favorable. Following personal contact of the writers with several restaurant owners, it was found that more interest existed in the proposed course of instruction than had originally been anticipated. Several operators immediately volunteered the use of their dining rooms as a place to meet. Others freely expressed a willingness to close their places of business for the period of time classes were in progress so as to enable their employees to be in attendance. As a consequence of this unexpected degree of cooperation, the original experimental program was expanded to conform with the increased demands. Two schools of instruction were finally evolved. Managers of ten leading restaurants in the center of the business district were invited by personal contact to participate and bring as many of their employees as possible. Classes at restaurant "A" were scheduled from 3:30 p.m. to 4:30 p.m.

on Monday, Tuesday, Wednesday, and Friday with corresponding lectures number one, two, three, and four. Lectures and demonstrations at restaurant "B" were scheduled daily from 9:30

a.m. to 10:30 a.m. on Tuesday through Friday, inclusive; corresponding to lectures number one to four (Table I). The course was given during the period August 6-10, 1945.

TABLE I  
SCHEDULE OF INSTRUCTION\*

LECTURE NUMBER AND SUBJECT	DAY AND HOUR OF INSTRUCTION	
	RESTAURANT "A"	RESTAURANT "B"
One Bacteriology	3:30 P.M. Monday	9:30 A.M. Tuesday
Two Communicable Diseases	Tuesday	Wednesday
Three Medical Zoology	Wednesday	Thursday
Four Sanitation and Personal Hygiene	Friday	Friday

\*Following the second meeting at restaurant "A", the schedule was changed due to unavoidable circumstances. Classes were continued at restaurant "E" as indicated in Table III. Lecture No. 4 being given on Thursday instead of Friday as originally scheduled.

By virtue of this staggered schedule, it was possible for any one who missed one or two lectures at a predesignated school to catch up by attending the second school at another time and day. To enhance attendance, restaurants "A" and "B" were selected as the meeting places because they are located on the same street less than one city block apart. In addition, they afforded the advantage of adequate seating capacity and the comfort of air conditioning. Mention should also be made of the fact that of the ten restaurants cooperating in this project, five were located on the same street, four on an adjoining street less than one block away, and only one was more than one full city block distant from the furthest meeting place.

### Conduct of the Course

As is evident from the arrangements thus far discussed, every effort was made to promote the success of the experiment. One additional factor was clearly considered; namely, the inspectional grade of each establishment. Five establishments were grade "A", four were grade "B", and one was ungraded and operating on permit at the time this project was undertaken. The records on these ten food establishments indicate that nine possessed sufficient physical equipment and satisfactory premises, if properly used, to

warrant grade "A". White or colored uniforms, clean and freshly laundered, were worn by the employees in all ten restaurants. The apparent high degree of personal hygiene of the operators and employees together with many other physical factors of these restaurants tended to indicate that they were better than average. The grade, number of personnel employed, the seating capacity and approximate number of meals served daily by each restaurant are shown in Table II.

The subject matter covered at each of the four lectures and demonstrations can be briefly summarized as follows: One—Bacteriology:

A review of the size, shape and habits of germs, the methods and frequency of reproduction, the environmental requirements for growth and development and specificity of pathogenicity. Free-hand blackboard sketches and drawing were employed as an aid to clarification. The lecture was supplemented with a 16-mm. sound film, "Goodbye Mr. Germ". The period was concluded with the artificial contamination of previously prepared agar Petri plates and lactose broth in Dunham tubes. Separate agar plates were used to demonstrate the presence or absence of germs on human hair, fingers, a house fly, from a cough and on dust from the air. One sterile agar



plate was retained uncontaminated as a control. Two tubes of tap water, one seeded with *Escherichia coli*, were used to demonstrate the difference between

potable and contaminated water. Stained preparations of milk and blood were used to demonstrate microscopically various cocci and rods.

TABLE II  
PARTICIPATING RESTAURANTS

RESTAURANT	NUMBER OF EMPLOYEES	NUMBER OF MGRS. OR SUPERVISORS	SEATING CAPACITY	DAILY SERVINGS
A	17	2	101	400
B	50	2	146	1800
C	32	5	90	700
D	30	1	90	700
E	40	3	214	1000
F	18	1	39	800
G	9	2	63	500
H	7	3	54	330
I	12	2	42	600
J	16	4	122	1500
Total	231	25	961	8330
Average	23	2 to 3	96	833

#### Two—Communicable Diseases:

Differences between contagious and non-contagious diseases were discussed. Transfer of intestinal and respiratory pathogens by fingers, droplet, spittle and dust was shown to conform with the Source-Channel-Infection formula. This lecture was concluded with the presentation of the sound film "Twixt the Cup and the Lip", followed by a microscopic examination of the plates and tubes incubated since the previous lecture.

#### Three—Medical Zoology:

Insects and rodents as vectors of pathogenic germs was explained. The scientific data tending to confirm these creatures as a menace to public health and welfare was briefly reviewed. An appeal was made to owners and managers of eating establishments to take the necessary steps to prevent the ingress of these creatures. The showing of the sound films "Keep 'Em Out" and "The House Fly" concluded this period.

#### Four—Sanitation, Food Handling and Personal Hygiene:

The essentials of proper utensil

washing and sanitization, adequate and proper storage and handling of food, the importance of refrigeration, personal conduct and personal hygiene were emphasized. Post contamination following any number of acceptable practices was shown to be the cause of deleterious consequences. The showing of the silent film "Eating Out", together with a narration stressing the important scenes, concluded this lecture and demonstration.\*

#### Attendance and Reaction

Although the attending restaurant operators and employees were invited to enter into a discussion at the end of each of the four periods, it was not until the end of the fourth lecture that any appreciable reaction was manifested. Stock questions asked by attending members of the Health Department during the first three periods failed to stimulate the remaining listeners. The writers feel that this particular lack

\*For a more detailed discussion of the subject matter presented at each of the four meetings, readers are referred to the Health Bulletin of September, October, November, December, 1944, and January 1945.

of reaction is not a measure of the interest or lack of interest of the attending group. Personal contact of the writers with many people present revealed an unemotional interest in all the subjects. In several cases unsolicited expressions of appreciation were extended following dismissal of the group. In one case a manager expressed genuine regrets that steps had not been taken at her food establishment to enable all of the personnel to participate. Another manager stated emphatically that he thought that an agreement should be made whereby all participating restaurants would close for one hour during each lecture period so that all employees could attend the lectures. The manager of one of the restaurants where the lectures were given reported a few days later that he had noted an immediate improvement in food-handling technique among his employees following the lecture course. Of particular interest and importance was a discussion overheard by a member of the Health Department. One restaurant employee briefly and accurately related what she had learned about germs and catching diseases to several other employees who had failed to hear the first and second lectures.

The records revealed that the average attendance at each lecture represented approximately 17.5 per cent of the 256 people (owners managers, and employees) associated with the ten participating restaurants. Since each lecture was given twice, this indicates that approximately 35 per cent of the group attended each lecture. A sizeable number of this group attended all four lectures of the series. A few outside, but interested, persons heard one or more lectures. In one case, a patron remained to witness the lecture and demonstration and volunteered the

suggestion that the school be presented to the home canning class in progress elsewhere in the city. In Table III is shown the attendance record at each of the two schools.

TABLE III  
ATTENDANCE RECORD  
RESTAURANTS "A" AND "E"

DAY	WHITE	NEGRO	TOTAL
Monday	34	13	47
Tuesday	17	5	22
Wednesday	55	7	62
Thursday	49	15	64
RESTAURANT "B"			
Tuesday	28	9	37
Wednesday	38	15	53
Thursday	26	8	34
Friday	32	9	41
Average	35	10	45

### Conclusions

In evaluating the results of the data presented, it is necessary that account be taken of the existing wartime conditions with respect to management and labor. It is common knowledge among public health officials that eating and drinking establishments have been faced with an unprecedented problem of labor turnover. This, together with a scarcity of essential materials, including food-stuffs, has tended to aggravate a situation which, even under prewar conditions could be a source of much human grief and suffering. In the face of all these difficulties, and in an area where military personnel are ever present in large numbers, the cooperative efforts demonstrated by the ten restaurants in question is most gratifying. The need for more and better educational programs is an undebatable question. The desire of restaurant managers and employees to participate and cooperate has been clearly shown to exist.

# North Carolina Medical Care Commission National Committee For Medical School Survey

To: The Chairman and Members of the North Carolina Medical Care Commission.

Appointed by the North Carolina Medical Care Commission in accordance with the provision of an Act of the General Assembly (H.B. No. 594) of the State of North Carolina, the National Committee for the Medical School Survey has conducted a study of those factors pertaining to the need for and location of a four-year school of medicine as a unit of the University of North Carolina, and related considerations. On the basis of that study, it is the recommendation of the committee, amplified in more detail in the body of this report:

I. That the trustees of the University of North Carolina establish a four-year school of medicine situated on the campus of the University at Chapel Hill; **provided:**

a. That a hospital and health center program to provide greatly enlarged facilities be carried forward and that a practicable plan for financing medical and hospital care be established;

b. That such a school of medicine be an integrated part of a State University medical center which will include:

1. Appropriate facilities for the basic medical sciences, for research, and an adequate general teaching hospital;

2. A school of nursing;

3. A program for the preparation of essential personnel in fields ancillary to rendering medical and hospital care;

4. The present school of public health for the training of personnel in that special field;

5. The present school of pharmacy;

6. An active program for graduate and postgraduate education for physicians and allied medical personnel both at the medical center and in the State as a whole;

7. Arrangements to provide hospitals throughout the State with clinical consultations, roentgenologic, pathologic, and other services as may be desired by them;

8. A competent administrator at the medical center to coordinate all the activities of the center and integrate these on a State-wide basis as needed, and desired, in order to insure the utmost effectiveness in providing a better health program for North Carolina;

c. That such a school of medicine and associated services of the medical center, responsive to the will of the people, be integrated effectively and continuously with a State-wide network of hospitals and health centers in so far as these volunteer to cooperate; merely to expand the two-year medical school at Chapel Hill in order to graduate a greater number of physicians is not regarded as sufficient justification for such expansion;

d. That full utilization be made of the facilities of the voluntary, non-profit hospitals of the State; that these institutions remain autonomous units, expected to operate with high standards of service as required to provide proper medical care to the people of the State;

e. That, as far as possible, the activities of the four-year school of medicine be coordinated with those of the privately-endowed medical schools of the State to afford maximum service within North Carolina;



II. That the planning of the medical school development proceed as may be convenient; that, however, the construction and operation of the expanded medical school appropriately be timed with the development of the program for the construction of hospitals and health centers, in order to insure a properly coordinated advancement of the total State-wide health-service project of North Carolina; further it is thought that the exact sequence of elements involved in this project cannot be committed to blue prints at this time on the basis of information available to the Committee;

III. That the State of North Carolina consider education on an interstate or regional basis in dentistry both for white and Negro students; in medicine for Negro students and in public health nursing for Negro students as discussed subsequently in this report;

IV. That the University of North Carolina develop a philosophy of medical education, research, and medical care which will make it a service facility for the whole State.

### Supplemental Statements

The National Committee for the Medical School Survey presents the following in support of the above recommendations:

#### I. THE FOUR-YEAR SCHOOL OF MEDICINE OF THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL.

##### a. Expansion of the recent University of North Carolina two-year school of medicine to a four-year school.

There are several important reasons for expanding the present two-year school of medicine to one with the full four-year curriculum:

1. The four-year course in a single location offers the only completely satisfactory method of providing the best medical training. Inevitably, a two-year school is at a serious disadvantage in competing with those providing the complete required course of instruction. Newer ideas in medical education unquestionably will demand

marked reduction of the departmentalization which has become all too prominent. Teaching will, more and more, be conducted on vertical rather than horizontal planes, with instructors of the basic sciences now taught chiefly in the first two years contributing largely to so-called clinical teaching of the last two years, and vice versa. Such a reorientation would be impossible for a two-year school, unless by agreement its curriculum is coordinated and integrated with that of a four-year school.

2. A State financed and State controlled medical school has the advantage of being able to carry out over a long period of time policies which have been determined as representing the best considered needs of the entire State. Such long-term policies on the part of private institutions could not be predicted with certainty.

3. A four-year school operated under State control would be the ideal type of institution to provide the apical and focal point for the proposed State-wide medical program, fully integrated with it. The success of the program is dependent in large measure upon a system of medical education, undergraduate, graduate and postgraduate, which is geared to the needs of the whole plan.

4. The projected school may be expected to have a certain effect toward providing more doctors for North Carolina. This effect is likely to be disappointingly small, however, if the entire plan proposed by the Governor's Commission is not implemented fully. The four-year medical school alone, even under State control is only a part, even though an important one, of the complex mosaic required to make adequate medical care available to the people in all parts of the State.

In weighing the question of recommending immediate establishment of the four-year school, the North Carolina Medical Care Commission should consider the probable

great difficulty of obtaining suitable faculty under present conditions, as well as the very high building cost prevailing at this time.

**b. The expanded school of medicine should be located on the University campus at Chapel Hill.**

A number of powerful arguments favor location of the proposed four-year school on the campus of the University of North Carolina at Chapel Hill.

1. Progress in medicine is dependent upon close association with the basic sciences which serve as its foundation. Dr. Alan Gregg, Director of the Division for the Medical Sciences of The Rockefeller Foundation, has stated, "The growing fringe, the advancing frontier, of medical science may safely be assumed to be dependent upon contact with the natural sciences—indeed contact is too weak a word—coalescence would better describe the relationship". Such a coalescence may be anticipated reasonably only if the medical school is situated in close physical relationship to other university departments, such as physics, chemistry, biology, psychology and anthropology.

2. Advancement in medicine also depends upon the integration of social and economic factors which have a powerful influence upon problems related to the distribution of medical services to the people. Close association with university activities in social sciences and the humanities will undoubtedly be essential in providing faculty and students with modern concepts of these questions and in developing the proposed State-wide medical care program.

3. A university atmosphere provides cultural advantages for students and faculty and their families. The outstanding position of the University of North Carolina in the field of higher education would be an important inducement which definitely would aid in bringing desirable personnel to the medical school.

4. Administrative difficulties and expense to the university would unquestionably be reduced by locating the medical school at Chapel Hill.

5. A major objective of the broad program presented to the people of North Carolina is to train more doctors for practice in rural areas. Again using the words of Dr. Gregg, North Carolina "for a long time will need doctors accustomed to and contented with life in the smaller towns. Large cities set before medical students the attractions of city practices, of early specializing, of migration to the still larger cities and of something nearer to commercialism than can survive the test of rural practice". Chapel Hill offers the small community atmosphere conducive to training men for rural practice.

6. Medical schools in cities are likely to develop difficult problems of relationships with the local medical profession. On this point Dr. Gregg comments, "I know of no university medical school in a large city which, within my memory, has not had at least one serious quarrel between the university and the powerful and privileged professional leaders in the city. Unless your university medical leaders are resigned to offering teaching positions in return for support and collaboration of clinicians with few other claims to attention, they may well prepare themselves for a decade of pressures and political maneuvers. Usually if appointments are made quid pro quo and at a distance from the university, the character of the school depends on forces only slightly under university control."

7. A university hospital constructed in Chapel Hill will admit patients from all sections of the State on a basis of equality. Such a condition would be much less likely to prevail if the hospital were in a larger community which might reasonably expect more favorable consideration for its own citizens in return for such contributions as that particular city or county had made to

the site, building or maintenance of the hospital.

8. The organized medical profession of North Carolina has expressed itself in favor of the Chapel Hill location, and has promised full cooperation in the development of the school so situated.

9. Various schools and departments of the University will be essential in providing necessary instruction for public health workers, dentists, nurses, medical social workers, dietitians, nutritionists, various types of technicians and so forth.

10. Strong arguments might be made for locating the medical school in a large metropolitan center if one existed in North Carolina. There are no very large cities in the State. Therefore, it is better to take advantage of the University environment. The available locations other than Chapel Hill would supply relatively limited material from within their own communities. In fact there is no possible medical school location in the whole State which would not require sending students for short periods to other communities for supplemental instruction in order to secure maximal educational results.

\* \* \* \* \*

The Chapel Hill location involves certain disadvantages for which necessary compensation must be made. There will be a shortage of patients for teaching in obstetrics, traumatic surgery and certain other fields. Part-time specialists so useful in certain aspects of training will be less readily available than would be the case in a larger community. Health and social agencies will more nearly represent patterns to be found in rural areas, and even though this may be considered advantageous in developing rural practitioners, students should be familiarized with more complex organizations.

Medical school authorities must arrange opportunities for students to make up for such deficiencies as occur by providing affiliations with hospitals

and various institutions in other parts of the State. Such arrangement may constitute a helpful factor in integrating outlying hospitals with the medical center at Chapel Hill.

\* \* \* \* \*

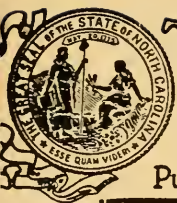
c. The expanded University of North Carolina School of Medicine should develop harmonious working relationships with the other two medical schools in North Carolina in providing the best possible medical care for the people of the State.

The only type of rivalry that should be permitted to develop between the schools should take the form of eagerness on the part of each to cooperate with the others more fully and to serve better the people of North Carolina. Because of its official character the University of North Carolina School should be expected to assume leadership in organizing a coordinating committee to plan and develop a State-wide program.



Mary Helen Ashton, age 3 years, daughter of Mr. and Mrs. D. F. Ashton, Raleigh, N. C. Mr. Ashton is Entomologist of N. C. State Board of Health.





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 Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.  
 Instruction for North Carolina Midwives.

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## First Grade

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An estimated 85,000 children, all around six years of age, will have entered school for the first time. For these children, this will mean an entirely new experience — without any precedent. The first day of school life is one of the most important in the entire career of any human being, in that it marks the beginning of a journey that may be subject to many interruptions, for various causes. When we, as adults, anticipate a journey, we undergo a period of preparation, in keeping with the importance of that journey. We provide ourselves with certain necessities, if we are bent on business, and with certain luxuries, if we are going for pleasure and recreation. But these journeys are of little importance, compared with that which lies ahead for the child who is entering school for the first time.

It is highly essential, then, that those responsible for our children's physical, psychological and mental welfare see that they are prepared. This responsibility falls directly upon the shoulders of parents, to whom these little ones must look for protection. They have no means of caring for themselves, but must look to those who brought them into the world, or have assumed the responsibility for their well being.

It has been estimated that about one-third of the children who enter school for the first time have correct-

ible physical defects, which, if neglected, may mean their educational, hence intellectual, undoing. These defects are both hidden and patent. Some are not even known to exist—being impairments of which neither the child nor its parents may be aware without a physical examination by a competent medical doctor, or, in some instances, specialists in the diagnosis and treatment of certain types of physical impairment.

Hence, it is highly important that, before sending your child to school, you should be able to answer "yes" to these questions:

1. Has my child had a complete physical examination by a competent medical doctor?
2. If any physical defects were found, have these been corrected?
3. Has the child undergone a dental examination, and have the defects, if any were found, been corrected?
4. Has the child been immunized against all diseases for which preventive or controllable measures have been discovered?
5. Have you had his vision and hearing tested?

As we have said, there are certain defects that are self-evident—defects that can be detected through means of simple screening procedure.

On the other hand, there are those which require careful medical diagnosis—defects that may be due to some



disease with which the child has been afflicted and from which it apparently has completely recovered. Despite appearances, however, there may be those hidden defects which can be brought to light only through means of a careful and thorough physical check-up and which, if uncorrected, may impair and retard the child's progress in school to such an extent that its whole educational career will end in failure.

Let us take a glance at last year's morbidity record, compiled by the State Board of Health. Among children of pre-school age in North Carolina—that is, children under six—there were 703 cases of diphtheria, 549 cases of measles (1945 was not an epidemic year), 54 cases of meningitis, 73 cases of polio, and 1,176 cases of scarlet fever. In addition to these, gonorrhea was discovered in 81 children under six, and syphilis in 175.

All told, we have here somewhere in the neighborhood of 3,000 children of pre-school age known to have been afflicted with diseases that may have resulted in various complications, many of which are subject to detection only by a competent medical doctor.

In addition to those who are potentially subject to impairment, there are, all over North Carolina, thousands of children of school and pre-school age whose hearing and vision are impaired, to a degree unrecognizable by parents—children suffering from hidden infections and various other conditions which either have or may impede their school progress. Undetected impairments often give the child an inferiority complex or retard its educational progress, when, in reality, the child has no mental impairment whatever; and if the correctible in the child were corrected, he might even become a leader in his school, rather than an apparently retarded student.

A child may appear to be reasonably healthy and, at the same time, harbor a condition that, in later years, may become a stumbling block. A good

physical examination by the family physician or, when the parents are unable to afford that, by the county health officer or members of his staff, is most likely to bring the condition to light and, thereby, give the child a new chance in the world.

Both physicians and public health officials emphasize the importance of seeing that the child is prepared to enter, or pursue its studies in, school, from a physical standpoint, as its physical condition easily may have a direct bearing on its intellectual, or mental, progress.

The opening of school in North Carolina—as in other states and sections—is just around the corner, and the time for parents to act is now. Any delay will defeat the purpose of this appeal. If the doctor, after making an examination of the pre-school child, can give it a clean bill of health, parents will have the satisfaction of knowing that the child is beginning its educational career, starting from scratch, with at least an equal chance to succeed among its fellow pupils. If, on the other hand, correctible defects are discovered, then the necessary corrections can be made and even if the child's start in school is temporarily delayed, when it does enter it will be free of impairments that might have been hazardous.

Consult either your family physician or your local health officer at once, if your child is among the 85,000 who will enter school within the next few days or weeks, and you will be given adequate advice as to what facilities for the protection of the child against disease are available, and just how these may be secured.

Remember, good health is the foundation of human happiness, the cornerstone of the well rounded life. You love your child, of course; then give it the benefits to which it is entitled—the protection without which it can never attain the more abundant life.

# North Carolina Medical Care Commission National Committee For The Medical School Survey Final Report

(Continued from August 1946 Health Bulletin)

## II. THE MEDICAL STUDENT AND THE FOUR-YEAR SCHOOL OF MEDICINE OF THE UNIVERSITY OF NORTH CAROLINA.

### a. Relationship of the four-year school of medicine to opportunities to study medicine and to distribution of physicians.

Advocates of a four-year State-supported school of medicine have contended that such a school in North Carolina would:

1.) Provide a greater opportunity to North Carolina students to study medicine and 2.) Increase the supply of physicians practising in the State. Data pertaining to those factors deserve further consideration:

#### 1. Opportunities for the study of medicine by North Carolina students.

Employing the statistics for the three years 1935, 1937 and 1940<sup>1/</sup> there were 1.90 applicants for admission to all medical schools in this country for each candidate admitted. The comparable ratio for applicants from North Carolina can be estimated as follows: In the academic year 1940-1941 there were 396 students from the State of North Carolina in the four medical school classes of all medical schools.<sup>2/</sup> During that year 27.9 percent of all medical students were freshmen<sup>3/</sup>, so that of the 396 students from North Carolina, about 110 were freshmen in 1940-41. Since an average of 212 students from North Carolina applied for admission to various medical schools in the three years 1935, 1937 and 1938<sup>1/</sup>, it appears that the ratio of applicants to the numbers admitted to

medical schools is about 1.93 which is not significantly different from the figure of 1.90 for the country at large. Thus it would appear that applicants from North Carolina have about as good a chance of gaining admission to a medical school as is true of applicants from the country at large.

North Carolina now has two medical schools, Duke and Bowman Gray. However, the evidence indicates that applicants living in states with no medical school at all have about the same opportunity to study medicine as do the residents of a state having a medical school. In the country at large there were 5.0 medical students per hundred thousand inhabitants enrolled in the freshman classes of all medical schools in the academic year 1944-1945. Exactly the same ratio applies for the total freshmen enrolled that year from the twelve states in this country which have no medical school.<sup>4/</sup>

Analyses made by Hamilton<sup>5/</sup> are given in table 1, in which the states are listed in the order of increasing numbers of residents admitted to medical schools in 1938-40. From the United States at large, there were 45.7 admissions per million of the population. North Carolina had fewer admissions, 40.6. Apparently neither this difference nor the order of the states generally bear any relation to the presence or absence of a four-year state medical school in a given state. The half of the states with fewest admissions include fourteen with no such school. The half with most admissions include thirteen states with no four-year state medical school.

Furthermore, states having fewer ad-

<sup>1/</sup> As compiled by C. C. Clay from the Journal of the Association of American Medical Colleges.

<sup>2/</sup> J. A. M. A. 117:693 (Aug. 30) 1941.

<sup>3/</sup> J. A. M. A. 117:700 (Aug. 30) 1941. (Calculated from the figures of table 22).

<sup>4/</sup> J. A. M. A. 129:52 (Sept. 1) 1945.

<sup>5/</sup> J. Assn. Amer. Med. Coll. 121:33 (January) 1946.

missions than North Carolina include eight states which had a four-year state medical school, while fifteen states with no such school sent more of their residents to a medical school than did North Carolina.

Hamilton has similarly analyzed the percentages of the rural population of the various states which are admitted to medical schools. Here again (see table 2) while North Carolina rates lower than the whole United States, there appears to be no relationship to the presence or absence of a four-year state medical school within a state. The half of the states sending the fewest of its rural residents to medical schools include 14 states having no state four-year school. The half sending most applicants from rural areas include 13 such states.

## 2. Distribution of physicians in the State.

Table 3 lists the states in order of increasing numbers of physicians per unit of population. North Carolina rates very low here, with one physician (before World War II) per 1,303 inhabitants, with only three states having fewer physicians. However, this does not seem to be related to the absence of a four-year state medical school in North Carolina. The half of the states with fewest physicians include 14 with no such school. The half with most physicians include 13 without a state four-year school.

On the other hand, there is a clear relationship between number of physicians in a state and the per capita income<sup>6/</sup>, also shown in table 3. The increase in physician population definitely follows increases in per capita income.

TABLE I

Number of First Year Medical Students from the various states per million of the population, 1938-40. States de-

signated by an asterisk had no four year state medical school.<sup>5/</sup>

*New Mexico	20.7
*Maine	27.1
*Kentucky	28.8
*Alabama	32.1
Georgia	33.9
Texas	34.0
Oklahoma	36.0
*Arizona	36.1
*Missouri	36.5
*Mississippi	36.6
*Florida	36.9
*Delaware	37.5
*Idaho	38.1
Michigan	38.1
Arkansas	38.9
Tennessee	39.1
*Rhode Island	39.3
Virginia	40.3
South Carolina	40.5
*NORTH CAROLINA	40.6
Iowa	42.2
California	42.7
*New Hampshire	42.7
*Montana	42.9
Ohio	43.3
Minnesota	44.8
*West Virginia	45.2
*Washington	45.5
UNITED STATES	45.7
*Wyoming	47.9
Indiana	48.7
Wisconsin	49.4
*Massachusetts	50.7
*Connecticut	50.9
Maryland	51.1
*Pennsylvania	51.8
Oregon	53.2
Louisiana	53.3
*Nevada	54.4
*North Dakota	54.5
*New York	54.8
*South Dakota	56.0
*New Jersey	57.7
Colorado	60.5
*District of Columbia	64.8
Kansas	65.0
Nebraska	79.0
Vermont	83.5
Illinois	93.4
*Utah	116.3

6/ From "Statistical Abstract of the United States, 1944-45: Income payments to Individuals by States, 1929-1943."

5/ J. Assn. Amer. Med. Coll. 121:33 (January) 1946.



TABLE II

Number of First Year Medical students from rural areas per million of the rural population, 1938-40. States designated by an asterisk had no four year state medical school.s/

*District of Columbia	-----
*Delaware	-----
*Idaho	5.7
*Connecticut	7.3
*Florida	8.2
*Arizona	9.2
Georgia	10.2
Texas	11.1
*Maine	11.9
Arkansas	12.0
Oklahoma	12.4
Michigan	12.8
California	14.0
*New Mexico	14.1
Illinois	14.4
*Kentucky	14.5
*Nevada	14.9
Louisiana	15.2
*Alabama	15.7
South Carolina	16.0
Minnesota	16.4
*Rhode Island	16.7
Colorado	16.9
*Mississippi	17.7
*NORTH CAROLINA	17.7
Oregon	17.9
*Missouri	18.1
*Pennsylvania	18.1
*Washington	18.4
Tennessee	18.5
UNITED STATES	18.6
Wisconsin	19.2
Ohio	19.6
*South Dakota	20.6
Iowa	22.7
Virginia	23.7
*West Virginia	24.9
Indiana	25.9
*Montana	25.9
Maryland	27.0
*New Jersey	27.4
Kansas	27.7
*New York	28.5
*Utah	28.6
*New Hampshire	28.6
Vermont	33.9

*North Dakota	37.3
*Wyoming	44.5
Nebraska	46.2
*Massachusetts	76.5

TABLE III

Distribution of Physicians (1940) as related to per capita income (1941). States designated by an asterisk had no four year state medical school.

STATE	Population Per Physician	Per Capita Income
*Mississippi	1,459	\$ 283
*Alabama	1,365	359
South Carolina	1,355	354
*NORTH CAROLINA	1,303	397
*South Dakota	1,266	484
*Idaho	1,241	543
*North Dakota	1,239	534
*New Mexico	1,211	415
Georgia	1,106	389
Arkansas	1,066	332
*Montana	1,042	682
*West Virginia	1,037	477
*Kentucky	1,031	369
Tennessee	1,003	413
Oklahoma	993	417
Louisiana	959	433
*Utah	957	592
Texas	930	497
Virginia	927	565
*Wyoming	915	696
Wisconsin	891	649
Kansas	870	549
*Maine	854	602
*Arizona	840	562
*Florida	834	531
Indiana	829	705
Michigan	826	790
Iowa	823	609
Nebraska	805	510
Minnesota	792	589
*Washington	789	833
*Delaware	786	1,023
UNITED STATES	751	693
*New Hampshire	749	629
Oregon	746	752
*Rhode Island	742	900
Ohio	741	815
*Pennsylvania	732	751
*New Jersey	716	912
*Missouri	714	621
Vermont	687	613

*Nevada	660	912
*Connecticut	658	1,059
Illinois	648	865
Maryland	609	851
California	580	974
Colorado	572	620
*Massachusetts	547	883
*New York	492	994
*District of Columbia	296	1,101

**b. The medical student profits by encouragement and assistance.**

Substantial good may be anticipated from adoption of a State policy for the recruitment, the guidance, and the financial assistance of medical students, where the latter is advisable.

**1. The dean of students in the school of medicine.**

Any program designed to recruit, guide, and financially assist medical students might require the whole time of an especially chosen medical school official who might be called dean of students. He would have many responsibilities, among them to furnish vocational information to high schools and colleges as regards career-opportunities in medical and allied fields, the personal, educational, and professional qualifications required for entering these fields, the cost of preparation, opportunities for making a living and so on; to give personal advice through college and professional school, through the internship, and in relation to opportunities for practice in the various areas of the State, and kindred questions. This dean could also give invaluable information as a basis for selecting those to receive student loans and scholarships. Even after location for practice this official might continue as the adviser of the practitioner and on that account might take on the direction of postgraduate education at the medical school and for the State as a whole, provided he had ample assistants both for his guidance work and for his work as director of postgraduate education. Such procedures should help to locate personnel at strategic points in the State and tend to hold them there as compared to the expectations of a *laissez faire* policy.

**2. Loans and scholarships for needy medical students.**

Although there is considerable experience upon which to draw with reference to loans and scholarships for medical students, their effectiveness in securing practitioners for designated rural areas has not been demonstrated with any conclusiveness. The factors involved are far more complicated than a casual view of the situation may reveal. No doubt this leads to the conclusion that further experience with various plans is indicated, always in the spirit of experimentation.

Whatever system of loans and scholarships may be adopted by North Carolina these points may be pertinent: Prior to the study of medicine students are not sufficiently informed or experienced enough to be able to choose with finality the type of medicine and the ultimate location for practice. They will at times change their minds regardless of any previous agreements to the contrary. Some method of being relieved of obligations imposed by the loan or scholarship by repayment with interest should be provided; here the dean of students will be of inestimable assistance, as at all other points in the operation of the program.

One school of thought holds that loans made to students on a promise to practice in a rural community should be cancelled on a regular schedule; thus for every year's practice a note of given amount would be cancelled, the other notes to be paid in cash with interest if the contract is not fully carried out.

**III. TRAINING INTERNS AND RESIDENTS IN AN INTEGRATED HOSPITAL SYSTEM.**

Throughout the country in recent months there has developed a tendency for hospitals to become affiliated in groups in educational programs offered to house officers including interns and residents. In such programs a strong central hospital assists affiliated hospitals in improving their educational programs and rotates interns of the

main hospital through the affiliated institutions capitalizing maximally on the educational resources of the affiliated hospitals. This program has resulted chiefly from attempts by hospitals to increase the educational opportunities for the large number of returned medical officers seeking advanced hospital training. However, it has resulted in an improvement in house officer training since there is an effort to employ every opportunity to increase the quality of the intern program. In an integrated system of hospitals, such as is contemplated in North Carolina, it would be highly beneficial to incorporate such a cooperative training program in the plan for better hospital care of the population. It is axiomatic that the organization of training programs in a hospital tends to improve the quality of care rendered the patients in the hospital. In many instances of integrated training programs of this kind, the central organizing hospital is a medical school institution. The teaching hospital of the University of North Carolina School of Medicine would be expected to assume such a role.

#### IV. CORRECTION OF THE MALDISTRIBUTION OF PHYSICIANS.

One of the most stubborn of all the problems of medical care is the maldistribution of physicians. This problem has been with us since colonial times and apparently is no nearer solution now than it was in those days.

There is a great tendency to believe that because there is a scarcity of physicians in certain rural areas, more physicians should be graduated from medical schools to take care of this scarcity. If we know nothing else about maldistribution, we at least know that the problem will not be solved simply by training more doctors. Despite this well known fact, there are several states now proposing new medical schools, principally because they believe that by creating such new schools within their borders they will be solving the problem of the shortage of doctors in their less populous areas.

A comparison of the situation in Vermont and Maine is an example of the fallacy of this type of reasoning. Vermont has had a four-year medical school during the past twenty years. Maine has not. Despite this fact, the medical situation insofar as total numbers, as well as distribution of physicians, are concerned in the two states, has remained remarkably parallel in these past twenty years.

It is evident that there is no single solution. There must be a multiple approach. The problem must be comprehensively attacked and from many points of view: (1) social and economic conditions should be improved; (2) the medical isolation of physicians should be overcome; much can be done in this regard through an integrated hospital program; (3) students might be carefully selected from rural communities and partially or wholly subsidized, if necessary; many such students might return to the small communities from which they come; (4) there should be an attempt on the part of both the medical school and the communities concerned to keep in constant touch with prospective practitioners during and after their school years for the purpose of attracting physicians to communities where they are needed. Such a persistent follow-up and "courtship" has been found effective in Tennessee; (5) local community income guarantees may be necessary in certain areas.

There are probably other factors of importance, but if efforts could be directed along all of the above channels, a sufficiently comprehensive approach to the problem of maldistribution of physicians might be achieved. No one of the above approaches would in itself suffice. All together would give real promise of success.

#### V. INTEGRATION OF THE HOSPITAL NETWORK AND THE MEDICAL CARE PROGRAM WITH THE FOUR-YEAR MEDICAL SCHOOL AND THE MEDICAL CENTER.

Medical education has passed through many stages and we may have arrived



at the point where it should be related to practically all phases of medical care. The medical school might join with the hospitals of the State in the development of a teaching program which would result in equal emphasis upon medical education and medical care.

**a. As an essential element of such a program, there must be a graded hospital organization or network (small community hospitals, district centers, and the medical school hospital center) which is integrated with the medical school.**

Each unit in the hospital network must be clinically independent. Each must be equipped to handle medical problems within well-defined limits. Then, a patient who presents a problem beyond the scope of a given unit would be referred by his physician to that unit in the hospital organization where proper facilities would be available; thus, medical traffic would be controlled.

In having the medical school hospital center in a small community, a distinct danger must be recognized; for there is apt to come a time when the base hospital will draw too many patients from surrounding communities in order to fill its own beds. Continual growth in that direction might result in relative medical atrophy in the outlying areas in a process of centralization at the base and subordination at the periphery, whereas decentralization and coordination are the ideals. It is evident, therefore, that the medical school hospital center should not be a mammoth institution; but rather one designed to provide only the clinical material required for the teaching program on the campus. Reference will be made later to the manner in which the clinical cases in the outlying hospitals may be utilized in medical education.

**b. In order to accomplish the complete integration of medical education and medical care, the medical school must play a principal role.**

The medical school is the source of

an inexhaustible supply of physicians, but it is likewise the source of the high standards of medical care which will guide all practicing physicians. It should serve as the center from which high quality medical care radiates as far as possible over the geographic area. The medical school should direct the education program on three levels—the undergraduate, the graduate, and the postgraduate.

1. In offering broader education to the undergraduate, it might be possible to arrange for final year students in the medical school to serve clinical clerkships in community hospitals where there are teaching residents; a student might spend one or two months in a given hospital. The experience would introduce him to the methods of practice in a small community. He might become interested in the idea of returning to such a community and practice eventually since he would realize that a physician practicing in a rural area would maintain contacts with his medical school through the steady stream of medical students and residents, through clinics conducted by the faculty members, through postgraduate courses at the medical school, and through coordinated work on his patients. The student would understand that he would not be medically isolated if he became a country doctor in a community of that type.

2. The small community hospital cannot offer the type of experience and training required in a full intern-training program. Therefore, it must be the responsibility of the base and district hospitals to train the interns. On the other hand, a teaching resident who had served several years in a large center might rotate from the base hospital through a succession of community hospitals on a schedule of one month in each; thus, he would not only enrich his own store of medical knowledge and experience, but he would tend to improve and maintain high standards of medical care in those institutions through demonstration of the practices current in the

medical school hospital center. In such a program, one rotating teaching resident could, in the course of a year, staff twelve community hospitals. Preferably each community hospital should have one surgical resident for one month each year and one medical resident for a similar period annually. Under such a program two residents would be required each year for twelve small hospitals.

3. The medical education program on the post graduate level should be concerned not only with courses at the medical school center, but also with clinics, teaching ward rounds, and lectures in the affiliated hospitals; it should involve as well the coordination throughout the hospital organization of certain ancillary medical services (laboratory, x-ray, pathology, dietetics, library, electrocardiography, etc.). A successful postgraduate program should be comprehensive; it should preserve an intimate relationship to clinical practice; and it should be automatically continuous.

NOTE: The program of the Bingham Associates and the Tufts College Medical School as it has organized the hospitals in Maine is an excellent example of a working plan. Several papers by Doctor Samuel Proger have given the details of this program. They have appeared in the *NEW ENGLAND JOURNAL OF MEDICINE*, 220:771-770 (May 11, 1939) and 225:351-358 (September 4, 1941), *THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*, March 25, 1944, Volume 124, pp. 823-826, and *HOSPITALS*, April 1946, pages 48 to 54.

## VI. THE UNIVERSITY TEACHING HOSPITAL AND THE HOSPITAL NETWORK.

### a. Administration.

1. The success of a health program for North Carolina depends in large measures upon the training and experience and executive ability of persons responsible for its administration. The education of these executives should be shaped to the functioning of the various units in the system. The recommendations of the National Commission on Hospital Care\* of Chicago, in its final report in October 1946, will undoubtedly influence the organization and functioning of hospitals in an integrated health pro-

gram. The United States Public Health Service and the Commission on Hospital Care are cooperating very effectively in the nationwide study and it can be anticipated that the recommendations will be adopted as national policy in the administration of the grants-in-aid program to the states for hospital and health center construction under Senate Bill 191, if it is enacted.

The Commission on Hospital Care indicates in its publications that it will recommend the organization of hospital service on a regional basis around the larger centers of population, with the smaller units in the more rural areas depending upon the larger hospitals for consultant services in the various specialties in medicine and in administration. It is possible that some of the smaller units in such a system might be under the direct supervision of the administrator of the nearest large unit. In this way the smaller units could maintain high professional standards at reasonable cost. The Commission on Hospital Care also indicates that it will recommend that the general hospital become a community health service center by adding to its functions responsibility for the care of contagious diseases, including tuberculosis, nervous and mental, and chronic diseases, as well as public health and visiting nurse services and offices for physicians and dentists. To manage successfully this much more complex institution would require a higher degree of executive ability, training, and experience than is possessed now by many hospital executives.

### 2. Training of administrators.

(a) To educate the executives of these hospitals and health service centers, courses in administration

\* Prompted by the evident need for a national survey of hospital service, the American Hospital Association appointed an independent, non-political, public service group, the Commission on Hospital Care, to study the present facilities, the practices, policies and programs of voluntary, non-profit, private and governmental institutions of all types that care for the sick and to recommend a program of expansion when needed and the further development and coordination of hospital service.

should be added to the curriculum of a school of public health and it should be a regional school for several states in the South. Vanderbilt and the University of North Carolina are the only institutions south of Baltimore that offer degrees in public health administration.

The courses should be offered at the graduate level to both physicians and laymen. One year of academic training should be required, plus a year as an administrative intern in an approved hospital.

(b) If the school of public health at the University of North Carolina becomes such a regional training center, the teaching hospital in the medical center should be used for such practical experience as is required during the academic year and its administrative staff as lecturers to the students. It is assumed that the administrator, his administrative assistants, and the department heads in the teaching hospital will be selected for both their administrative and teaching abilities. They should be available to all units in the State for consultation on administrative problems and exercise a constructive leadership in carrying out the health programs.

(c) Research projects on construction, maintenance, and operation should be carried on in connection with the courses in administration. The results should be made available to the field and the faculty teaching these courses should take the initiative in organizing refresher courses periodically for the in-service training of administrators. The same group should organize institutes and other training programs for hospital trustees, both at Chapel Hill and in each hospital region.

#### b. Finances

1. After a community in any one of the several lower-income areas has secured a modern health services center adequate to its needs and capable management, it still would not attract the necessary health personnel—physicians, dentists, and nurses in partic-

ular—until it found some method different from what it has at present to pay for the services. People in these communities either will not or cannot pay for service on an individual basis from their limited resources. There is no point in establishing a medical center to train additional health personnel for North Carolina until some way is found to pay them adequately for their services.

2. The only practical solution of this problem is for the people in these communities to pool their resources on the insurance principle. Eventually they should pay for all health services in this way, with certain exceptions, but it is not practicable to start off with a comprehensive plan. It is the hospitalized or catastrophic illness that causes people in the lower income brackets the most trouble, because of the comparative size of the total bill.

(a) Any prepayment plan, to be a success, must in a democracy be sold to the people and that means education. They are not sold now. Protection against the hospitalized illness is easiest to sell. To begin with, the plan should pay the entire bill for any illness requiring hospital care, including medical, dental, and nursing service. There should be a time limit on days of service in any one year and no exceptions, either as to type of illness or injury requiring hospital care or as to payment of the full bill for a ward bed and the necessary medical, dental, and nursing care.

(b) To anyone familiar with rural and small-town North Carolina it is obvious that such a plan could not be sold on a voluntary basis to the people without some subsidy. The principal reason is economic. The average farmer does not have as much money with which to pay for health service as his city neighbor. North Carolina has recognized the principle that every child should have an equal opportunity for an education and it has used its taxing power to equalize the opportunity. Health is just as important as education to the public welfare and



the State should use its taxing power to equalize the opportunity of every citizen to adequate health protection. The federal government recognizes this principle. The major factor governing distribution of federal funds to state health departments is income per capita. Senate Bill 191, the Hospital Construction Bill, recognizes the same principle in the proposed grants-in-aid to states for hospital construction. Connecticut gets one-third of the cost of its approved hospital projects, but Mississippi gets 75 per cent.

(c) The State of North Carolina, instead of contributing from tax funds for the care of the indigent in hospitals, might subsidize a prepayment plan for hospitalized illness, the subsidy being in proportion to the ability of the people of each county to pay for service. Such a subsidy would be a powerful stimulus to county health and welfare authorities to enroll all indigents and near indigents in the plan, the county paying the contribution when the individual or family could not pay.

(1) To utilize the services of the limited number of physicians practicing

in the State now to best advantage, the plan should include ambulance service. The seriously-ill patients would be transported by ambulance to the nearest hospital best suited to treat their particular disease or condition. A large proportion of babies are now born without a physician in attendance. With the great bulk of the population enrolled in the prepayment plan, practically all babies would be born in hospitals and the high maternity and infant mortality would be greatly reduced.

(2) When the prepayment plan for hospitalized illness has become well established, medical service by the physician in the home and in his office should be added. Perhaps by that time some assistance from the federal government would be available. This would in turn increase the number of physicians practicing in the comparatively rural areas.

(3) The Blue Cross plan, sponsored by the medical profession and the hospitals, is a logical agency to use to administer the state subsidized prepayment plan.



From V-J Day to the end of 1945, traffic deaths rose 36 per cent over 1944; Traffic accidents to children 5-14 years old increased 24 per cent in 1945; Total time lost by American workers because of accidents on and off the job last year amounted to 415,000,000 man-days, equivalent to a shutdown of plants with nearly 1,400,000 workers; Deaths in railroad accidents at grade crossings went up 4 per cent in 1945, according to the National Safety Council.

## New Broadcast Hour

Beginning October 5, the State Board of Health's weekly broadcast over Station WPTF in Raleigh, will be heard each Saturday morning from 9:15 to 9:30. At present, these programs are heard each Tuesday afternoon from 5:30 to 5:45. The schedule now in use was inaugurated in the early summer, when it was necessary for the station to make numerous changes because of the fact that daylight savings time is used at points where most chain programs originate.

Remember, beginning October 5, you will again hear your State Board of Health program over WPTF each Saturday, beginning at 9:15.

# Preliminary TB Survey Findings

BY WILLIAM H. RICHARDSON

State Board of Health  
Raleigh, North Carolina

The slogan of Public Health is: "Prevent the preventable, correct the correctible, cure the curable." But the first step is to detect the detectable. All progress is based on a knowledge of facts as they exist. Knowledge is power, provided we use it. Otherwise, it becomes just so many statistics.

For many decades we knew that typhoid fever, for example, existed, and that it caused many deaths each year. The best we could do was to make the patient comfortable, deprive him of food, except just enough to keep him alive, and hope for his recovery.

Then, Walter Reed established the fact that flies are typhoid carriers, and this led to improved sanitation, looking toward the elimination of flies. The next step was the discovery by science of the means whereby a person could be successfully immunized against typhoid fever. The net result was that both the incidence and the consequent death rate were reduced, commensurate with popular response to preventive medicine's offer of deliverance.

There are other diseases in the same category — diseases which formerly caused the death of thousands each year, but which are now being prevented and controlled. Diphtheria, whooping cough, tetanus, rabies and other serious maladies might be mentioned in this connection.

## Detecting the Detectable

As to detecting the detectable, it is highly important that certain diseases be detected, if they are to be promptly treated and cured, or controlled. We have in mind at this time tuberculosis, which has been made the subject of an unprecedented case-finding program by the North Carolina State Board of Health; and, already, we are beginning to get somewhere, as indicated by cer-

tain preliminary findings which have been recorded by Dr. Thomas F. Vestal, Director of the Division of Tuberculosis Control, through which this case-finding program is being carried out.

We now have some facts about tuberculosis in North Carolina, which reflect the progress of the program. The ultimate goal is to get a chest X-ray of every person in North Carolina. It will take time, of course, but a good start has been made. The achievement of this goal is highly important, for various reasons, principally because it is necessary to find the cases before they can be treated, and because the earlier a case is detected and treated, the better the chance of recovery. Furthermore, early cases can be treated at less expense, as we shall presently see from Doctor Vestal's findings.

## Three in a Thousand

From X-ray pictures already made, three persons out of every one thousand examined in North Carolina have been found to have active tuberculosis.

The Board of Health's case-finding program thus far has shown that 65 per cent of the infected have tuberculosis in the early stage, 25 per cent in the moderately-advanced stage, and 10 per cent in the far-advanced stage.

Among present admissions for sanatorium treatment, only 20 per cent are suffering with tuberculosis in the early stage, 35 per cent with moderately-advanced tuberculosis, and 45 per cent with tuberculosis in the far-advanced stage.

Now, what does this contrast mean? Simply this: that most of those who seek hospitalization do so only after the disease has advanced. This means not only longer, but more expensive treatment, as we shall see from further findings recorded by Dr. Vestal.

These figures may be a bit tedious to the disinterested, but they constitute some very vital information, which it is necessary to use in the prosecution of a well-ordered tuberculosis control program, such as North Carolina hopes to carry out.

To hospitalize 100 patients, on the present admission basis, costs \$265,625 for the duration of **their illness**; divided as follows: 20, with early tuberculosis, for 300 days, at \$2.50 per day, \$15,000; 35, moderately-advanced, 550 days, at \$2.50 a day \$48,125 and 45 far-advanced, for 1,800 days, at \$2.50 a day, \$202,500, making a total of \$265,-625.

### What Survey Shows

The mass X-ray program shows, out of each 100 cases, 65 in the early stage, which it would cost \$48,750 to hospitalize; 25 in the moderately-advanced stage, which it would cost \$34,375 to hospitalize, and 10 in the far-advanced stage, which it would cost \$45,000 to hospitalize, making a total cost of \$128,125, as compared with \$265,625 on the basis of present admissions, or a saving of \$137,500 on each 100 patients, which is more than enough to hospitalize an additional 100 patients for the duration of their illness.

The reason for this is obvious, now that you have the figures before you—the mass survey detects more early cases, which are treated at less expense, patients who can be more easily and more quickly cured and who will not reach the advanced stage of the disease, at all.

The State Board of Health has made chest X-rays of the approximately 10,000 who registered this fall for courses at the Chapel Hill and State college units of the Greater University of North Carolina.

Chest pictures recently were made of more than 600 teachers in the public schools of Raleigh and Wake County. A survey has been in progress in Cleveland County, and units have recently completed a survey of adults in Gaston County, during which 51,00 chest pictures were made. A survey also was

made in the City of Rocky Mount, with another to follow in Wayne County.

According to present findings, there are approximately 10,000 active cases of tuberculosis in North Carolina, half of which are as yet undiscovered.

### Actual Work in Progress

The State Board of Health is actually engaged in a mass survey for the detection of tuberculosis cases in North Carolina—but detection is just the first step. When the cases are discovered, it is necessary to **do something about it**, if control and final eradication of the disease are to be the results. Arrangements have been made with the Sanatorium for the follow-up of cases discovered in these mass surveys, indicative of the splendid cooperation the Sanatorium is giving in the prosecution of this vitally important health project.

To do what ought to be done will require both money and qualified personnel. This poses a problem which must be met. Here is a case in which the truth can make us miserable, instead of free.

The Board of Health's mass survey for the detection of tuberculosis will, at least, be a great contribution to our knowledge—which will call for the exercise of wisdom in handling the results.

And so, you have been given first-hand information about one of the most vital public health projects ever undertaken in North Carolina, and this is only a part of the great public health program now in progress in this State—a program which involves many phases of preventive medicine. Probably the most important finding so far in connection with the tuberculosis survey is the substantiation of the contention that the earlier tuberculosis cases are discovered the greater the chances of the patients for recovery, and the less the expense, as early cases, which make up the majority of those found in the survey, can be treated for much less money than far-advanced cases, or even moderately-advanced cases.



# Notes and Comment

By Acting Editor

The National Committee which was selected by the North Carolina Medical Care Commission has submitted their final report in which they outline a comprehensive plan for the improvement of medical care in North Carolina.

We consider this report presents one of the most important programs which has been brought to the attention of our citizens in many years. It deserves the thoughtful study of all those persons who are interested in the well being of North Carolina. For this reason we are publishing the report in the Health Bulletin. The length of the report makes it impossible to publish it in a single issue. We, therefore, gave part of it in the August Bulletin, a part appears in this issue and we hope to include the remaining portions of this report in the October issue.

The National Committee was composed of persons who had no selfish motives in North Carolina. All of the members were non-residents of the State. All were men of extensive experience and mature judgment. They studied carefully the information available and then endeavored to acquire new information to supplement that. They approached the problem as a group of physicians in consultation who are attempting to make a diagnosis on a patient and prescribe a proper course of treatment. To all intents and purposes this report presents the basic information upon which the diagnosis is founded—it prescribes the treatment recommended.

The treatment will cost money. There have been some doubts raised as to whether North Carolina can afford to spend enough money to carry out the plan proposed by the Committee. It would seem more rational to ask the question—Can we afford not to spend enough money to carry out the plan?

Most thinking people realize that one way or another we pay for good

health whether we get it or not. A sick person cannot earn money—a well person is physically able to work. If the Medical Care Program can heal some of the sick people in the State and prevent others from getting sick, the increased earning capacity of these people will pay for the cost of the program.



Dalma Farley Jones

Date of Birth—August 10, 1944  
Place of Birth—Asheboro, N. C.  
Age at time of picture—5 months  
Parents—Mr. and Mrs. Dalma B. Jones, 830 S. Fayetteville St., Asheboro, North Carolina  
Date of Vaccinations:  
Whooping cough—March 1, 1945  
Diphtheria—April 1, 1945



# The Health Bulletin

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Dr. J. N. Johnson, seated left, receiving the Scroll presented to him by the members of the North Carolina State Board of Health in recognition of the faithful service which he has rendered. Dr. Johnson, prior to his resignation, had been a member of the State Board of Health for fifteen years and had been Vice-President of the Board for the past several years. The Committee presenting the Scroll: Dr. S. D. Craig, President, center standing; Dr. Grady Dixon, Vice-President, seated right; Dr. C. V. Reynolds, standing right; and Dr. Paul E. Jones, standing left, who succeeded Dr. Johnson as the Dentist member of the Board.

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### FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

### SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters.)	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instruction for North Carolina Midwives.

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## Future Trends of Public Health In North Carolina\*

BY ROBERT F. YOUNG, M. D.

District Health Officer, Tarboro, North Carolina

SINCE the North Carolina Public Health Association last met in 1944, the "shooting phase" of World War II has come to an end—at least, the shooting of bullets. But no sooner had the guns of war been silenced than the wheels of reconversion began to turn sluggishly. And one of the first advertisements that was seen in the leading newspapers and magazines—gloriously depicting one of the sorely needed products of the post-war period—was one which brazenly promised, "There's a new car in your future." In the advertisement above this slogan appeared a crystal ball, which revealed a bright, new, shiny car—resplendent in chrome-plated radiator grill, new tires, and the many other features longingly dreamed of by the automobile-hungry American Public.

It occurred to me when I first saw this advertisement that we who are in Public Health in North Carolina should just as dramatically, and **certainly** with more assurance of delivering the goods, proclaim to the people of this great State—"There is a new life in your Future"—a life complete with sixty-five years-plus of unequaled health, as compared with only thirty-five years a century ago—a life free of diphtheria, the present terror of our

children; a life in which typhoid fever and smallpox are ghosts of the dead past; a life with tuberculosis a vanishing disease; and, yes, a life in which even cancer and the mental diseases are being conquered by new medical discoveries and, especially, by a **new understanding** on the part of the Public.

You can see by now that our "sights" are trained on the **future** of Public Health in North Carolina and not on the dismal statistics of the past. With our course definitely set, then, I should like to point out several outstanding "ports" where we need to lay anchor long enough to unload some **desperately** needed cargo. But, first, there is the Port of Clearance where our sailing papers are placed in order. We are told here that there must be full-time local health departments in **all** of the one-hundred counties in North Carolina, instead of the ninety-four counties which we now have. There are only six more counties to go, then, before our papers are in order, which compares very favorably with the Nation as a whole, with forty per cent of its counties still without organized local public health service. The Officer in Charge of the Port of Clearance finds **ALSO** that our personnel crew is critically short and suggests the following corrective measures:

\*Presidential Address before the North Carolina Public Health Association in Winston-Salem, October 7, 1946.

(1) That salaries for public health personnel be made commensurate with the training required and with the responsibility involved for the various classifications, and that these salaries be **maintained** in accordance with the prevailing economic conditions.

(2) That the American Public Health Association and the United States Public Health Service create a commission to study the curricula in the medical schools and to recommend to the medical schools and training schools for nurses throughout the country that Public Health and Preventive Medicine be made a **major subject** and be presented in such a **comprehensive** manner that the medical students and nurses will be thoroughly cognizant of the **full importance** of this subject in our present-day medical program. With health recently defined in the preamble to the constitution of the new World Health Organization as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity," it can be foreseen in the **not too distant future** that physicians will deal more and more with patients who are interested in a positive phase of good health. Patients will report to physicians to **prevent disease** and to **maintain good health** rather than wait until preventable diseases develop and present themselves for treatment. Therefore, in my humble opinion, preventive medicine is now and **will become more so in the future** a subject of major importance to every medical student rather than to just those who plan to specialize in Public Health.

(3) That more and better in-service training be made available to public health workers in North Carolina;

(4) That a complete Public Health Library—headed by a full-time librarian, and located in the State Laboratory of Hygiene with its present library facilities—be set up and be made available to all public health workers in North Carolina, in order to assist them in assembling information and up-to-the-minute data on any subject in Public Health. This library should serve to remind us that our **student**

**days are never over in Public Health.**

After receiving our clearance papers with the above conditions, we begin our Public Health Cruise, and, in due time, arrive at the Port of **Revised Planned Parenthood Program**. Here allow me to present briefly the population trends in this country, and I quote from Dr. Smillie in his recent book "Preventive Medicine and Public Health"—(1)

"During the past century, the social structure of the Nation has been profoundly changed from a rural to an urban civilization. In 1830 practically all the people were living under an agricultural and pastoral economy. By 1940, slightly more than fifty per cent of the population were living under urban conditions; less than twenty per cent were actually living on farms.

" . . . As the United States became urbanized, the birth rate fell to such a degree that in 1940 it passed the replacement level (.98) for the nation as a whole. Dublin has pointed out that the vital balance was below 1.0 even before 1940.

"Furthermore, the reduction of the birth rate has been quite selective in **relation to social groups**. Roughly classified, in 1940, the lowest birth rates were encountered in families of: (1) Wealthy people living in large industrial centers; (2) Intellectuals and the social groups that comprise college graduates, the learned professions, and particularly university teachers and others in the teaching and professional fields; (3) The "white collar" class of industrial workers; (4) Skilled workmen in industry; (5) Rural land owners, where mechanization of agriculture has resulted in living conditions that are an approximation to those of urban life.

"The average number of children per family in 1940 was in inverse ratio to this social classification; **all were close to or below** the maintenance level.

"The **large families** in 1944 were limited, for the most part, to; (1) Families of first generation immigrants; (2) Urban families of native stock from the **lowest** economic and social levels; (3) Rural families of low economic and

educational status, particularly tenant farmers, and notably the Negro families of the rural areas of the southern tier of states, and the Mexicans and Indians of the Southwest.

"Thus, the **maintenance** of the vital balance of the Nation in 1944 was secured by replacement of the population from families of the **lowest economic, intellectual, and social levels.**"

To put it another way, **there are too many lap dogs** in North Carolina, as well as throughout the country as a whole, that have better homes, receive better food, and, yes, that are even given more love and security than many of our children.

For this Port, then, we need to unload a cargo of more **emphasis on a positive phase of Planned Parenthood**—a phase that would encourage and provide expert medical assistance when needed to the groups in the **upper and central core of society** to at least maintain themselves so that there will not be a **weakening of the quality, or reduction in the virility, of our American stock.**

Clearing the Port of Planned Parenthood, we come next to the Port of **Diphtheria** which has a very rough and poorly protected harbor—with its waters churning with **white caps**—to remind us of the tenacious membrane of diphtheria that choked the life from ninety-six children in North Carolina in 1945.<sup>(2)</sup> These ninety-six deaths were distributed geographically in our State as follows: Coastal Plain, 11; Piedmont, 41; Mountains, 27;—or roughly, in accordance with the density of white population, which contributed eighty-two per cent of the deaths. Most of the cases were among males and eighty per cent were among children under six years of age. To bring this **mountain of needless childhood deaths** into proper focus, it is observed that New York City during the same period had only six deaths from diphtheria, while Chicago had only three deaths. These two of the world's largest cities, then, with their teeming millions, or with at least four times the population of North Carolina, had

**fewer than approximately one-tenth the number of deaths from diphtheria than did our state.**

A companion killer—**whooping cough**—claimed the lives of ninety-two children in North Carolina during 1945, to raise another bold challenge to Public Health.

It is most appropriate and urgent, therefore, that we discharge at once a large cargo at this port, of mass combined **Diphtheria - Whooping Cough Immunization**, together with plenty of state-wide health education, to guarantee a safe harbor for our children.

Looming ahead of us we see next the **School-Health Port**. This is a very large port with approximately 1,000,000 children attending our North Carolina schools, most of whom travel daily to and from these schools on the world's largest transportation system. I recommend here that the N. C. Public Health Association appoint a committee to study with the School-Health Coordinating Unit and the State Board of Education the problems involved and to formulate a **progressive standard school program**, which would include all allied agencies, such as the Blind Commission, orthopedic clinics, medical profession, and others. This committee should begin this study at the earliest possible moment, and, if necessary, during 1947 work in close cooperation with the Legislative Committee of this Association.

The next anchorage is **Tuberculosis**—the Port of the "White Plague." Recently we read of the disastrous hotel fire in Chicago where approximately fifty people lost their lives. This news story made all the front pages in the newspapers of the country and was given out in bulletins to the radios, but even this disaster pales beside the disaster, tuberculosis, when we realize that **every day** in the year approximately **143 American citizens** lose their lives to the tubercle bacillus. During 1945, there were 1,198 victims of tuberculosis in North Carolina, with Craven, Martin, and Pasquotank counties leading the State in the order named with the highest death rates, by place of



residence.<sup>(3)</sup> The tubercle bacillus—waxy coated demon of the microscopic world—has defied all the modern miracle drugs that have been hurled in its direction and still poses a **major threat** to the lives of those from fifteen to forty-five years of age.

Our principal weapons in combatting this disease are (1) early diagnosis; (2) prompt hospitalization and treatment of all cases discovered; and (3) complete follow-up of all contacts of new cases. To this program must be added, however, the words of caution recently written by our distinguished guest speaker, Dr. Hillebo,<sup>(4)</sup>—“Suspicious film findings must be corroborated by a positive tuberculin test and by positive bacillary findings. Let treatment be delayed and judiciously deliberated until all the facts are in and all the evidence is evaluated.”

We must unload at this Port as many photofluoroscopic X-ray units as needed for a mass tuberculosis X-ray survey and follow-up of North Carolina from the mountains to the sea, and thereby reverse the present ratio of only one new minimal case of tuberculosis discovered to two far-advanced cases. Next, we need more adequate sanatoria in North Carolina, and we need them **now**. Two to three months is too long for patients to wait to be admitted for treatment and isolation—and I sincerely hope the next Legislature will hear this cry for more sanatorium beds that comes from the coast in the East and echoes **all the way** to the mountains in the West. But the cargo we **really need** at our **Tuberculosis Port** will be heard from the **splendid speakers** on our program this afternoon.

Continuing our voyage, we find ourselves overlooking the Harbor of **Mental Hygiene**, where we soon see that this port is entirely too small to accommodate the traffic that comes to its piers. As of August, 1946, Dr. David A. Young,<sup>(5)</sup> General Superintendent of Hospitals for the Insane in North Carolina, advised that there were 8,885 patients in the five mental hospitals, including Camp Sutton, in North Caro-

lina. Our mental hospitals in North Carolina provide a ratio of 216.9 beds per 100,000 population, as compared with an average of 298.2 beds for the South Atlantic States. At the two white hospitals, there is a waiting list of between two and three hundred each; and at the school for the feeble-minded there is a waiting list of nearly 650. At the present time and for the immediate future, at least 1500 additional beds are needed in our mental hospitals.

One of our leading public health problems, and we **must recognize it as such**, is chronic alcoholism. There are, according to a recent conservative estimate,<sup>(6)</sup> 750,000 chronic alcoholics in the United States. In addition there are 2,250,000 excessive drinkers. Alcoholism may lead to an alcoholic psychosis of which we have 13,500 in institutions in this country. The State Hospital for the Insane in Raleigh during the fiscal year 1942-43 admitted three alcoholics with psychosis and 127 without a psychosis out of a total of 573 first admissions! In 1943-44, the same hospital admitted one alcoholic with psychosis and 103 alcoholics without a psychosis out of 482 first admissions. For these two years, then, at the Raleigh State Hospital for the Insane, **twenty-three per cent of the first admissions were due to alcoholism.**

The cost of chronic alcoholism in mental hospitals throughout the country is approximately \$13,000,000 annually. The cost of maintaining drunken persons in jail—many of whom should be in hospitals—is about \$25,000,000 annually. It readily can be seen that chronic alcoholism is one of the most costly conditions with which preventive medicine has to deal.

Another big factor in the Mental Hygiene Program is our old enemy, syphilis. In 1943-44, the percentage of first admissions<sup>(7)</sup> due to syphilis at the Raleigh Hospital was 6.4 per cent; at Morganton, 8.3 per cent; and at Goldsboro, 13.9 per cent.

The above phases of mental hygiene are stressed because of these cases could be prevented. Specialists claim that from ten to twenty-five per cent

of mental patients in general could be prevented by proper **early treatment in mental hygiene clinics**. I urge, therefore, that the local and state public health agencies in this State, in co-operation with our mental hospitals, develop a Preventive Mental Hygiene Program in North Carolina, at the **earliest possible moment**. This program would not only result in the saving of thousands of wrecked lives but millions of dollars as well.

The next port we come to is a peculiar one in that its general outline resembles a crab. This is the Port of Cancer. Suffice it to say that cancer killed 607,000 Americans between Pearl Harbor and V-J Day—**more than twice as many as were slain by the Germans and Japs.** (8) Right now cancer is killing twenty men, women, and children every hour of the day in this country. We are averaging approximately 217 deaths a month from cancer in North Carolina.

In 1945 the North Carolina General Assembly enacted a law to provide for a program of cancer control to be administered by the State Board of Health with the able assistance of the Cancer Committee of the Medical Society of the State of North Carolina. The Cancer Society has contributed \$25,000 for the administrative costs, and additional Federal funds are available for technical phases of the program. One of the points of the program stressed by the Cancer Committee of the Medical Society is **education of the public**, particularly through the schools. This is certainly **sorely needed**. Millions of dollars are **squandered** annually by desperate victims of cancer who plod from quack to charlatan, each of whom claims to have a **miraculous** remedy. The fact needs to be stressed in **every household** in North Carolina that cancer can be cured by **only X-ray, radium, or surgery**, or a combination of the three, and that **no remedy** has yet been presented in the **authentic** medical literature which, when taken by mouth or when rubbed on the skin, will cure cancer.

We in Public Health can do **our part** in this educational movement. Moreover, we need to stress the advantage of **early diagnosis** which results from annual complete examinations for everyone who has passed the fortieth milestone. This program, to succeed, must be integrated in the general public health program on a year-round basis. For example, cancer can be discovered in our routine fluoroscopic clinics, in our post partum clinics, and it isn't unusual to discover this condition during the physical examinations in our Venereal Disease Clinics.

A very strange scene, indeed, meets our eyes when we first sight the next stop. Everything seems to have been the victim of a full-grown hurricane, in that the whole port is a **total wreck**; but when we cruise nearer, we see this is the Port of **Automobile Accidents** and realize, of course, that nothing could be intact and nobody possibly could be alive in such a place as this. One may wonder why such a stop would be included on a public health cruise, but it is quickly realized, of course, that a North Carolina citizen killed by an automobile accident is **just as dead** as one suffered out by cancer or tuberculosis, and, furthermore, the crude death rate is raised just as much by such a death as by any other death. I plead with the members of this Association to lend their full support to the following recommendations:

(1) Educational program for safety driving.

(2) For those who don't understand and appreciate the **soft word of warning**, rigid enforcement of the traffic laws of our State. A stiff road sentence and permanent revocation of the driver's license for every second offense of drunken driving would go a long way toward making our North Carolina highways safe for law abiding citizens.

(3) The State Patrol should at least be doubled.

(4) Rigid inspection of all automobiles at least every six months and elimination of all those found unsafe.

It is common knowledge that North Carolina highways have become the graveyard for all worn out automobiles—discarded as unsafe in other states.

(5) Annual examinations for drivers' licenses.

I firmly believe that if the above cargo could be unloaded at this **stricken** port, chaos could be transformed to order, and, of course, hundreds of our citizens could be saved from **mutilation** every year.

And, now as we clear this harbor and see our last stop looming ahead, our ship is riding light, while we prepare to drop anchor at the Port of **Sanitation**. Orders are boomed to the crew to unload the following goods for betterment of Sanitation in North Carolina:

(1) A state-wide stepped-up program to provide safe rural water supplies—to correct the many open wells that mar the scenery and, of course, the health, even along most of our **principal North Carolina highways**. The days of moss covered bucket should, once and for all, be made a thing of the past. Too many of our rural schools, particularly our small schools for Negro children, have as their only water supply an open well or an unprotected spring. We cannot expect these children to grow up and insist on an approved water supply and sanitary sewage disposal facilities at their homes if such conditions continue to exist in many of the schools.

(2) Intensify the program of food sanitation in our cafes, restaurants, meat markets, and hotels, by offering full assistance and cooperation to this industry in making it one of the cleanest safest in the Union, and, at the same time, seeing to it that the public

is adequately protected against inferior and inadequate foodhandling equipment and, above all, against **careless, unfit, or diseased** foodhandlers.

(3) Increase our efforts for a higher percentage of pasteurized milk in North Carolina.

And, now, as we clear the last stop and approach our home port again, I urge that this Association cooperate with every other agency involved, and support in every way possible the new North Carolina Medical Care Program that is so desperately needed in our State.

In conclusion, I plead that we serve our profession diligently during the coming year, remembering that the "moving finger writes and having writ moves on." Remember, too, that "life is short and the art is long" and that **hard work** and a persistent attitude of **research** are fundamental to progress in Public Health. Finally, I plead that we utilize every golden moment to the fullest to make **certain** that our handiwork is revealed in the future in the form of a **greater abundance of health** for the citizens of North Carolina.

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# North Carolina Medical Care Commission National Committee For The Medical School Survey Final Report

*(Continued from September 1946 Health Bulletin)*

## VII. THE RELATION OF MEDICAL AND PUBLIC HEALTH FACILITIES.

Public health is but the sum of the health of individuals. Medical science—itsself a complex of the natural and social sciences — influences the sum total of health in proportion to the completeness with which it is applied, the degree to which its specializations are integrated, facilities for research, and the current state of knowledge. The objective of all medical specialties, including that group directed particularly to service in preventive medicine, is to promote general health, control the incidence of preventable diseases and postpone premature death and disability. Medical science must, therefore, so relate its many elements as to focus all upon a common purpose and then must so coordinate its services as to bring its full potential to bear upon the total health problem.

If these premises are accepted—as they must be unless we are willing to accept for today the state of knowledge of yesterday—then the relationship of a medical center to public health facilities and the place of the health center in a program for the improvement of health facilities can be simply described.

### a. Graduate and Undergraduate Training

The medical center, through its school of public health and other facilities, is indispensable for graduate training of medical, nursing, engineering, health education and other personnel specializing in public health service and practice. In turn, the school of public health can well serve the medical school as a department of preventive medicine in teaching the medical and social epidemiology of diseases and the causes and conditions

underlying optimum health. Correlated with the strong science department—both natural and social—of the University, an excellent curriculum can be developed.

### b. Research.

Today's concept of health is much broader than a purely negative approach through the suppression of obvious disease for it comprehends also those factors which subtract from the sum total health but which are sub-clinical in their expression. An adequate medical faculty, complemented by the faculty of the school of public health and together with other existing resources of the university's faculty, could do much to advance frontiers of knowledge in areas of which little is now known. The challenge of an opportunity to associate within a single university such a comprehensive, scientific leadership should be accepted.

### c. Leadership.

Administrative leadership is one thing and intellectual leadership quite another. Both are necessary to any rational pattern of public health service. Through consultations, study of special problems and refresher courses, a medical center such as is envisioned in other sections of this report can influence profoundly the quality of public health service in North Carolina. There needs to be a more intimate association of the health officer with the clinician and clinical medicine; otherwise, public health practice tends toward sterility and away from its parent profession.

On the other hand, clinical medicine not infrequently limits its consideration to the sick individual and overlooks the fact that the practicing physician is a first line of defense in both the prevention and cure of disease. The

medical center should see to it that under-graduates in medicine have an opportunity for realistic experience in public health problems at the service level. Such a course of action would add substantially both to the service and leadership of physicians in public health work.

In brief, through graduate and undergraduate work, research and leadership, the medical center can add immeasurably to the personnel resources available for health work and, in addition, contribute substantially to the quality of service.

#### d. Organization.

1. The medical center should, as a major principle of policy, approach the problem of medical care from the point of view of prevention. Full emphasis must be given to the control of the causes of ill health if the medical care program is to be realistic economically and effective functionally. Working with the State Board of Health and through that agency with medical centers throughout the state, it should be possible substantially to reduce the present level of taxation imposed by preventable diseases and to improve the quality of both public health and medical service.

2. Irrespective of such administrative relationships as might be deemed desirable, the closest possible functional associations should be achieved. The health center service area in and around Chapel Hill should become the "field clinic" in which preventive medical practice is demonstrated to and participated in by undergraduate medical students. Other health centers might be added as the need is recognized, but, as an initial arrangement, the medical officer in charge at the Chapel Hill area can serve also as an Associate Professor of Preventive Medicine for the School of Public Health. Later, it may be worthwhile to provide health center externships where students may have an opportunity both to acquire experience and to render service.

3. Perhaps the agencies concerned may find it desirable to locate the quar-

ters of medical and health centers in the same building wherever this is physically possible. Indeed, it might be found useful ultimately to provide that the service areas for medical and public health facilities be made practically identical in order that the total problem may be met by total effort. In any event, it is a fact that as much or more in the way of integrated service and the direction of effort toward a common purpose can be achieved through association of physical facilities and intimate informal contact of personnel as through deliberate administrative action.

4. Fully to implement a balanced medical care program in North Carolina will require more adequate financial support of the State's health program by state funds. According to data included in the report, "To the Good Health of North Carolina," less than one-fifth of the expenditures under the supervision of the State Board of Health for the fiscal year 1944 were derived from state appropriations. The other four-fifths (\$1,764,592) were supplied from the Federal Government, private philanthropy and miscellaneous sources. Moreover, the total sum may be inadequate, for very small contributions are being made to the support of local health services and, according to the same authority, the needs for certain special health problems "also warrant additional state funds." This is a fundamentally insecure basis upon which to rest the public health program for the citizens of the state and also may be poor economic policy since it is usually less costly to control preventable diseases than to treat them. It would appear that the state should assume a larger share of the obligation to put existing knowledge of preventive medicine to work in protecting the health of its citizens.

#### VIII. EDUCATION IN NURSING.

- a. Present status of education in nursing in North Carolina.

The National League of Nursing Education reports forty-six schools of nursing in North Carolina, exceeded only in the number of schools by Illinois,

Massachusetts, New York, Ohio, and Pennsylvania. Notwithstanding, North Carolina ranks relatively low in proportion of nurses to the population as compared with other states. This situation is explained by the unusually large number of small schools of nursing, with limited enrollments. Such small schools can hardly be expected to meet the rising standards of nurse education, requiring more thorough preclinical preparation and wider and more comprehensive experience in the various aspects of nursing care, including psychiatric nursing, certain aspects of public health nursing, and perhaps nursing in the home. Even though many schools may meet the increasing cost of nurse education the number of students graduating from small schools in many instances cannot justify the expense involved.

**b. Need for education of the practical nurse.**

1. For a number of years it has been obvious that the professional graduate nurse must be supplemented by another type of nurse if the growing requirements for nursing service in hospitals and in the home are to be met. This trend will be further accentuated by the construction of new hospitals, the enlargement of existing hospitals, and by the insistent demand for better medical care on the part of the masses of our people. It is believed that the time has already passed when this subject must be faced and action taken.

2. The less acutely ill, the convalescent, and the chronically ill patient can be satisfactorily cared for under supervision by the practical nurse, who can be prepared for registration within a twelve months period, and during this preparation can function in important ways in hospital service, under the teaching and supervision of the graduate nurse. The United States Office of Education will shortly publish a manual covering the education of the practical nurse. Many courses have already been set up for the purpose and a few states have enacted legisla-

tion for the registration of the practical nurse.

3. The purpose of this statement is merely to direct attention to the opportunities for practical nurse education, particularly in states with a considerable number of relatively small schools of nursing; such schools can in many instances substitute practical nurse education for professional nurse education to considerable advantage.

**c. Undergraduate and postgraduate training of the professional nurse.**

The State of North Carolina as a substantial aid in meeting its requirements for medical care should consider the establishment of a well planned, professional, university school of nursing with outstanding educational leadership. In time it may also wish to establish a program for the preparation of nurse educators, nurse administrators, and broadly prepared head nurses, supervisors, and clinical instructors. A state with many hospitals is in special need of the services which such a center of nurse education can provide.

**d. Financing professional nurse education.**

Inasmuch as the cost of professional nurse education of a high quality is expensive, the time appears to be at hand when colleges and hospitals operating such schools should not be expected to do so unless either substantial endowment, or State subsidy, is available. It is suggested, therefore, that North Carolina consider subsidizing several outstanding professional schools of nursing in the State in addition to the school proposed for the University medical center and the courses at the privately endowed medical schools of the State.

**IX. REGIONALISM IN EDUCATION.**

**a. The justification of regionalism in education.**

Regionalism in education is no longer a pretty phrase; its practicality is being demonstrated as an accepted routine. Certain types of professional and highly specialized technical education can demonstrably better be provided on an inter-state basis. Here it



is not assumed that the states when acting independently cannot financially afford to conduct every phase of education which may be demanded. Rather the basic assumption is that a higher quality of certain types of education at lower cost can be undertaken on a regional basis to greater advantage than on a state-by-state basis. To illustrate, veterinary medicine, despite the automobile, is still required to prepare workers for the care of farm animals and pets in variety. However, few states in the Southeast can justify supporting a school of veterinary medicine merely to meet the needs of the particular state concerned, especially since this type of medicine, now developed technically, requires expensive facilities and personnel. Two or three states can meet essential needs in veterinarians by joining in the support of a single school of veterinary medicine, located as conveniently as possible to the states willing to support it with students and finances.

**b. Examples in medical and dental education.**

Perhaps the two best examples of regional education at present are to be found in the arrangements between Virginia and West Virginia for the education of the graduates of the two-year medical school of the West Virginia University at the Medical College of Virginia, Richmond, and the arrangement of several Southern states with Meharry Medical College for the education of their Negro students in medicine and dentistry. In each of these cases the cooperating states buy services from an institution in another state, or in the case of Tennessee and Meharry Medical College in the same state, by an agreed-upon subsidy to the institution directly concerned. Such subsidies run from four to five hundred dollars per student per year to one thousand dollars per student year. In addition the students pay tuition unless the cooperating states make payment for them, which may or may not be done. In order to equalize the cost to the student the state may make additional contributions toward travel

expenses and toward living expenses at a distant institution.

**c. Achievement of quality through regionalism.**

There is another important principle involved in regional education; it is regarded as far more expedient to have a joint, high-class professional and technical institution in a given area than many poor ones. Quality can be achieved more readily on a regional basis. Further, if every Southern state were to attempt medical and dental education for Negroes there would be insufficient students available to justify the continuance of Meharry Medical College although it is a well established, high-class institution with superior physical plant, able teachers, and substantial endowment.

**d. Southern Governors interested.**

The Governors of the South have already demonstrated an interest in regional education and have given evidence of willingness to assume leadership in its behalf.

**e. Types of education adaptable.**

Several types of education for the Negro can best be set up on a regional basis: education in medicine, dentistry, pharmacy, nursing, public health nursing, particularly the latter in the nursing field, graduate education in agriculture, engineering, and so on. The development of dental education for white students as well as Negroes deserves consideration from a regional point of view. A multiplicity of new dental schools in the South, many destined to be mediocre, can hardly be justified when a few well distributed schools of outstanding quality would meet every need and at lower unit costs. Such schools would be centers of graduate education as well as undergraduate study.

**f. Education of Negro medical and dental students.**

In the current movement in North Carolina to meet its obligations in medical and dental education for the Negro, it is recommended that a contract be negotiated with Meharry Medical College along the lines of the contract between Virginia and that

institution. Briefly stated, the Virginia Negro wishing to study medicine, or dentistry, applies to State College at Ettrick. If approved and Meharry is willing to accept him the college pays a given sum as a subsidy directly to Meharry and the student pays regular tuition to Meharry. The State of Virginia through State College contributes something toward tuition, cost of travel, et cetera. One of the obvious reasons, it may be pointed out, for subsidizing education in medicine and dentistry directly with the institutions concerned is the very high cost involved in these forms of education. Education in other fields may or may not require a substantial subsidy on a regional basis. Public health nursing for the Negro, although not so expensive, may also be justified on a regional basis due to the smaller demand for it. Thus far public health nursing at the Saint Philip school of nursing, Medical College of Virginia, Richmond, is the only institution of the kind in the South, and can perhaps meet all essential demands for public health nurses for some time.

#### g. Education of white dental students.

North Carolina is also invited to consider making arrangements for dental education for white students either at Emory University school of dentistry, Atlanta, or at the school of dentistry of the Medical College of Virginia, Richmond. Both of these schools are willing to exercise major regional functions upon request for such cooperation.

### X. A PHILOSOPHY WILL BE DEVELOPED.

#### a. Progress in health is North Carolina's next step.

North Carolina has developed its industry, agriculture, systems of public

education and roads, and has made general economic progress during the past few decades. Now the attention of its people has concentrated upon the field of health; for it has been recognized in recent years that North Carolina has been backward in medical care and hospitalization for the sick. The lack of these health services has been pronounced in the rural areas of the State and among the low income families of all races.

#### b. The University of North Carolina will lead the way.

Progress in other fields has been due in no small measure to the enlightened leadership of units of the Greater University of North Carolina. It is only natural, therefore, that the people of the State should assume that an expanded School of Medicine of that University would provide the leadership and guidance required in the development of a broad health program.

#### c. Development of the good health movement.

The North Carolina Hospital and Medical Care Commission, appointed by the Governor in 1944, made its theme, "More doctors, More hospitals, More insurance," familiar to all the people. The 1945 session of the General Assembly enacted House Bill 594 into law and thereby provided for the implementation of certain sections of that Commission's report while authorizing further studies which would lead to the formulation of a detailed program for improved health facilities. The Act created a permanent North Carolina Medical Care Commission and gave it the responsibility for developing that program.

#### d. Work of the National Committee for the Medical School Survey.

1. The new North Carolina Medical Care Commission was directed by the law to survey the cities of the State to determine the preferred location for the expanded medical school and the medical center which the Board of Trustees of the University was authorized and empowered to erect under certain conditions. At the same time,

NOTE: In the event of a contract with any institution for regional education, it is suggested that provision be made to permit an occasional student to go elsewhere. For example, if North Carolina should arrange with the Meharry Medical College, in common with other states, for the education of its Negro students in medicine and dentistry, provision should be made to permit a student to go to another institution when there is good reason for it. The nature of this provision might even vary with the institution selected.

the Act provided for the appointment by the Commission of a committee of experts in medical education and related fields who would make an independent survey and advise the Commission as to the best site for the medical school and medical center. When appointed, that group of experts became known as the National Committee for the Medical School Survey. Its first meeting was held in Raleigh on January 7, 1946 and there have been three subsequent sessions. The National Committee has studied the data which pertain to the health of the people of North Carolina. The seven members have considered the many factors involved in demonstrating the need for another medical school in this State. They have surveyed the potential sites for the proposed four-year medical school and medical center. They have reached a decision concerning those important matters.

2. Although some difference of opinion existed among the members of the National Committee with regard to certain features of the medical care program recommended by the 1944 report of the North Carolina Hospital and Medical Care Commission, the opinion supporting the recommendations of the National Committee as embodied in the present report was overwhelming. It is apparent to the members of the National Committee that the mere expansion of the present two-year medical school will contribute little to the medical resources of the

State. It is for that reason that the present report has recommended expansion to a four-year medical school only with the provision that that school be integrated with all the health facilities in North Carolina in a manner which will insure improvement in medical, public health, and hospital service throughout the State.

3. In the supplemental statements, the members of the National Committee have outlined the principles which are believed to be essential in the formulation of the comprehensive health program which has been envisioned for North Carolina. Methodology has been discussed in only a general way. It is believed that maximum effectiveness can be realized only through flexibility in developing those harmonious working relationships between the many individuals, organizations, and institutions which are essential to success. The members of the National Committee have been impressed by the fine spirit of cooperation exhibited by the representatives of the various interests and agencies in the State.

4. The very first of the supplemental statements suggested the creation of a coordinating committee which would serve to smooth the rocky road of progress in a new field. The importance of such a body cannot be over-emphasized. The need of subcommittees of comparable type may be recognized as the program develops.

## American Hearing Society

By MARTIN SEIFERT, Public Relations Director  
480 Lexington Ave., Suite 1151, New York 17, N. Y.

**W**ITH three million children in the United States having impaired hearing, there is more need than ever for a concerted effort to "Enlist for Better Hearing" during NATIONAL HEARING WEEK, November 10 to 16, according to Dr. C. Stewart Nash, pres-

ident of the American Hearing Society, Washington, D. C. The national organization is joined by its 120 local chapters throughout the country in this observance.

"Authorities estimate that one out of every ten persons in America has a



hearing loss, ranging from a slight loss to almost total deafness. The social and mental effects of this hearing loss can do much to warp the personality of a growing child, and in addition may prove an effective bar to the child's making a success of later life," said Dr. Nash. He went on to point out the necessity for parents and teachers to watch children carefully for any signs of hearing loss, especially after illnesses involving the nasal passages, ears or throat.

"Prompt attention by a competent otologist is necessary where such a hearing loss is suspected," Dr. Nash declared. "Inattention, falling grades in school, a tendency to shun the company of other persons are often indications of a beginning hearing loss. The majority of people with serious hearing defects need never have reached that stage if the trouble had been checked in its incipient state."

Dr. Nash recommended a vigorous hearing conservation program to be put in effect in the school system of the nation: periodic hearing tests and medical examinations followed by prompt medical attention if any impairment is discovered. A few states already put this program into practice and it is believed that if this program became universal in the entire school system of the country, the high incidence of hearing impairment could be cut to the point where it would no longer be a national problem.

While the American Hearing Society places major emphasis on its prevention campaign, it also recognizes the need to conserve the remaining hearing of those with existing impairments and to rehabilitate those handicapped by hearing losses to a normal life of economic and social activity. The work of the Society's local chapters in giving lip-reading instruction, fitting proper hearing aids, voice training and helping the hard of hearing to overcome their sense of frustration and psychological blocks to normal living is invaluable in the rehabilitation of the hearing-handicapped.

Among the other after-effects of

World War II is the addition of approximately 40,000 war deafened veterans to the ranks of the hard of hearing. Even more significant is the statement of the Veterans Administration that in a score of years there may be expected 200,000 hard of hearing or totally deafened veterans. The long experience of the American Hearing Society and its local chapters has been placed at the full disposition of the Army and Navy Aural Rehabilitation programs. In the past year, the Navy took advantage of this knowledge gained of long service in this field and had 100 Waves trained in lip-reading instruction by the New York League for the Hard of Hearing, a chapter of the American Hearing Society. The Waves then went back into the Navy hospitals and Aural Rehabilitation Centers to pass on their newly gained knowledge to war-deafened sailors. Also attached to the New York Chapter is the Veterans Sounding Post No. 1, a growing organization of hard of hearing veterans who find enjoyment in social activities and discussions of mutual problems.

These are some of the activities which NATIONAL HEARING WEEK celebrates.

#### Solitary Confinement

One of the most severe punishments man has devised for use against the criminal and anti-social individuals of his own species is solitary confinement. Even the most hardened characters have been known to crack after thirty or sixty days of this extreme treatment. What would you think then if you were told that millions of innocent persons in this country, including a large proportion of children, who have done no wrong . . . committed no crimes, are suffering from sentences of solitary confinement ranging from a few years . . . to life!

It's true!

These people and children are the hard of hearing. Their lines of communication with the outside world have been severed. Even their immediate families are unable to break down the walls of silence imprisoning the hard

of hearing individual without resorting to the most tiring stratagems. Think what it means for a person who has once enjoyed normal hearing and the full world of sound in which we live . . . who has enjoyed unhindered conversation, movies, concerts, radio shows, the sound of other people's laughter, of running water, of the million and one varied sounds which go to make up a cheerful environment . . . to be suddenly cut off. The loss of hearing is like a cruel and unjust visitation. In many cases, it's an embittering blow, causing the stricken person to withdraw from society . . . to become a recluse living within his own imprisoned self.

This needn't happen! The trumpets to blow down the walls of this auricular Jericho and the key to open the cell door of this solitary confinement are

available. The American Hearing Society (or insert name of local chapter) can open this iron door with its program of lip reading instruction, its experienced counsellors to fit proper hearing aids and help adjust oppressed personalities to once again take their proper places in the outside world of sound. The American Hearing Society has been doing this job and will continue to open the cell doors for prisoners of impaired hearing . . . with your help. But it is estimated that there are 15 million persons in this county who need that help. It is also estimated that through a program of conservation of hearing, the majority of these persons need never reach the stage where they require the use of lip-reading or hearing aids. These are some of the things which National Hearing Week calls to the attention of the American people. Enlist for better hearing!

## Notes and Comment

By Acting Editor

**OVERCONFIDENCE**—The final report of the National Committee of the North Carolina Medical Care Commission has received such wide spread approval of the rank and file citizens of the State and has enlisted such enthusiastic support that a very serious threat to its enactment into law has arisen. The supporters of the plan are definitely overconfident. Many people are of the opinion that because a large majority of our people favor the plan our General Assembly will unhesitatingly approve. By and large the General Assembly does enact legislation in accordance with the will of the people. The

people must, however, lift up their voices. Silent approval is not heard. When we know that our neighbor feels as we do we all too frequently assume that our neighbor will express our opinion. The neighbor assumes that we will speak for him—so nobody says anything. If this report is to be any more than an expression of logical thought based upon a thorough study of the needs of our people, the people themselves must speak to their elected representatives and urge that the entire program be carried out. The elimination of any portion of the plan will seriously affect the entire program.



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The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

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The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

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 Nine Months to One Year.  
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 Instruction for North Carolina Midwives.

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## The Need of Additional Beds For Tuberculosis In North Carolina

BY PAUL P. MCCAIN, M. D.

Sanatorium, N. C.

THE U. S. Public Health Service and the National Tuberculosis Association agree that in order to control tuberculosis in any community it is necessary to have two and a half sanatorium beds for each resident death from tuberculosis. In North Carolina during 1945 there were 1198 deaths from tuberculosis. There should be, therefore, 3000 beds for tuberculous patients.

At this time there are in North Carolina only 2205 beds for tuberculosis divided as follows: In the three State Sanatoria 1080 beds, 690 for white and 390 for colored. In the three State mental hospitals and Caswell Training School there are 212 beds for tuberculous patients, 100 for white and 112 for colored. In 16 county sanatoria there are 825 beds, 447 for white and 378 for colored. In the three private sanatoria around Asheville there are 88 beds for white private patients. Altogether there are 1325 beds for white and 880 for colored.

On account of their inability to secure nurses two of the sanatoria with a total of 52 beds have recently had to close. On account of the shortage of nurses and of other help also some of the other county institutions have not been able to run at full capacity during the last year or two.

Fortunately the Hill-Burton Bill, recently passed by Congress, which calls for the appropriation of \$75,000,000 a year for five years for hospital construction, specifies that beds for tuberculosis are to be provided as well as general hospital beds. The bill also specifies that one-third of the construction cost shall be paid by this Federal appropriation.

The North Carolina Good Health Association and the Executive Committee of the State Medical Society have approved a program which calls for the expenditure of four and a half million dollars for 700 additional beds for tuberculosis in the State within the next five years. This number will not bring our bed capacity up altogether to the two and a half beds per death recommended, but we are in hopes that by the end of the five year period the death rate will have fallen to such an extent that we will have this proportion of beds per death as recommended.

We have already presented requests to the Advisory Budget Commission for approximately two and a quarter million dollars for additions and improvements to the three State Sanatoria which will increase their bed capacity by 360. Since the counties as well as the State can get Federal aid

for construction we are in hopes that some of the other counties will be interested in establishing their own sanatoria, either alone or in conjunction with one or more of the surrounding counties. If a State or Federal subsidy maintenance could be had, counties would be all the more likely to establish their own institution so that their patients could have the advantage of taking the cure at home. If counties do not provide the additional 350 beds it is probable that the State will be asked to provide a sanatorium for Negroes somewhere near the central portion of the western half of the State and one for both Negroes and white somewhere in the northeastern portion of the State, and also a 50 bed unit at the medical school for teaching purposes.

Unfortunately, tuberculosis is largely a disease of the poor—of those who are poorly fed, poorly housed and poorly educated, and it is impossible ever to control the disease so long as those with advanced disease in the communicable form continue to live in crowded and unsanitary homes and have to be waited on by members of the family who are untrained in sanitation. A great majority of people under such conditions who develop tuberculosis have the disease in the far advanced stage before it is discovered, and even before the diagnosis is made they have likely already so badly infected the members of their households that many of them will develop the disease, and if they have to continue to live at home not only the patient but the whole family are likely to become county charges.

If diagnosed early tuberculosis is a curable disease. Early diagnosis can also prevent the spread of the infection to the other members of the family. Early diagnosis and the provision of a sufficient number of beds for the isolation and treatment of those with active disease will eradicate tuberculosis in human beings as Dr. William Moore, our State Veterinar-

ian, and his assistants have already eradicated the disease in cattle.

By means of mass X-ray surveys it is now possible to detect practically all cases of tuberculosis in the minimal stage. When large groups of apparently well people are X-rayed approximately one out of every two to three hundred is found to have active tuberculosis and at least 65% to 85% of those discovered in this way have the disease in the early and curable form, whereas of those who are not diagnosed until they begin to feel sick or have definite symptoms of tuberculosis 65% to 75% are in the advanced and communicable stage. Everyone really ought to have an X-ray of his chest. The Tuberculosis Control Division of the State Board of Health, of which Dr. T. F. Vestal is the Director, has six miniature X-ray film equipments and the Extension Department of the Sanatorium has one such unit. Five hundred or more persons can be X-rayed each day with each of these units. A number of the county tuberculosis associations and county health departments are planning to install units for mass X-ray surveys and three of the counties have already purchased machines.

Tuberculosis is such a tricky disease that it does not cause one to feel sick until the disease is well developed. It is estimated that there are approximately 10,000 citizens of this State who have clinical tuberculosis and approximately half of this number are not conscious of having the disease. They could find out the disease early before they infect the other members of their families and in time for them to get well if they would have an X-ray of their chest made.

Aside from the benefits derived through the relief of human suffering the investment of sufficient funds by the State and counties to eradicate tuberculosis yields the best possible financial return. In 1915 the death rate from tuberculosis in North Carolina was 156.4 per 100,000 and in 1945



it was 31.7. A low estimate of the cost to the community of each individual who dies from tuberculosis is \$3,000. The reduction in the death rate as the result of the efforts already made to control the disease have resulted in an annual saving of more than

4,000 lives and of more than \$14,000,000.

Won't each of you who reads this article speak to your Legislators and urge that the necessary funds for the eradication of tuberculosis be provided?

## Tuberculosis Is A Major Health Problem In North Carolina

BY DAVID T. SMITH, M. D., Former President  
North Carolina Tuberculosis Association  
Professor of Bacteriology and Associate  
Professor of Medicine at Duke University  
Durham, N. C.

**T**HE 1945 Christmas Seal Sale established a new record for the State of North Carolina and has provided funds for a renewed and more vigorous attack on tuberculosis.

In the forty years between 1905 and 1945, the death rate from tuberculosis in North Carolina has fallen steadily from approximately 200 to 37.4 per 100,000 citizens. During this time, state and county sanatoriums have been established, case-finding clinics are in operation in our health departments and in our hospitals, and the public has been educated to use the facilities.

The education of the public and the stimulation of the state and local official tax-supported agencies are the two chief functions of the Association. It should be realized by every one that the annual Christmas Seal Campaign is as valuable in keeping the public tuberculosis conscious as in raising funds for carrying forward the program for the eradication of the disease.

Although our death rate is only 37.4, it should be less than 10. At the present time, more individuals between the ages of fifteen and forty-five die of tuberculosis than from any other dis-

ease, and until it becomes one of the rare causes of death, in the most active period of life, it is absurd to speak of the tuberculosis problem as solved.

We are not the worst state in the union, or even near the bottom, since there are thirty-two states including the District of Columbia which have a higher death rate. But we are still far from the best. The February 1, 1946, report from the Bureau of the Census shows that in 1944 there were sixteen states with a lower death rate than North Carolina. Among these states are some with adequate sanatorium beds, well organized local units throughout the entire state, and a feeling of confidence that they can control the disease with their present program.

North Carolina still has inadequate sanatorium beds, open cases remain in local communities to spread the disease, and many counties have inadequate or no tuberculosis control programs. Tuberculosis is not under control in the State of North Carolina, but with the cooperative efforts of official and voluntary associations and the continuous support of our citizens, it can be eliminated.

# State Chairman's Message

BY D. HIDDEN RAMSEY

1946 Christmas Seal Sale Chairman

and

General Manager Asheville Citizen-Times Company

THE war against tuberculosis has not been won in North Carolina. We would be guilty of supreme folly if we relaxed our vigilance or our exertions at this time. It is true that the death rate from the disease has been sharply reduced since the turn of the century; for where one person is dying of the disease today, four were dying from the same cause in 1900.

Too many North Carolinians, however, are dying today from tuberculosis. In 1945, the disease claimed over 1,400 persons in our State. During the four war years almost as many North Carolinians were killed by tuberculosis as fell in their country's service.

Too many North Carolinians are suffering from tuberculosis. According to the best authorities, there are fully ten thousand of them. They are the equivalent of the population of many a North Carolina small city.

We can draw courage from the progress that has been made. We know, and have seen, what science and education, working together, can do. They have saved literally thousands of lives across the past forty years. But there is no justification for complacency. The ancient foe is retreating but he is

fighting a stubborn rear-guard action. He will resume the offensive if we drop our guard or diminish our efforts.

There are many agencies engaged in this war against tuberculosis. They are all rendering service of indispensable value. But the North Carolina Tuberculosis Association is the organization through which the average citizen can play his valuable role in the fight. Through it he can enlist his dimes and dollars in the war.

The North Carolina Tuberculosis Association needs more money if it is to press the fight with redoubled vigor and increased effectiveness. This money must come in small gifts and large gifts. It must come from all who wish to see tuberculosis completely eradicated as a scourge of our State.

We are drawing near the end of a year that has been extraordinarily kind to the people of North Carolina. We are approaching that holy season of the year when our thoughts turn more and more to the Great Healer. Is there any better way to show our gratitude for our economic blessings and our Christian loving-kindness than by buying Christmas Seals to the full limit of our ability?



A recently completed five year study revealed 600,000 deaths in the United States from infectious and parasitic diseases; 300,000 were caused by tuberculosis while more than 40 other diseases caused the other 300,000.

# What Is The North Carolina Tuberculosis Association - Some Of Its Problems, Objectives and Program

BY FRANK W. WEBSTER, Executive Secretary  
North Carolina Tuberculosis Association  
Raleigh, N. C.

THE North Carolina Tuberculosis Association is a non-official health agency, affiliated with the National Tuberculosis Association, incorporated under the laws of North Carolina, and operated and maintained without the support of public tax funds. It is a medico-lay organization endeavoring to effect the closest possible cooperative relationship between all health and welfare agencies. It operates under a constitution and by-laws and with an annual program and budget. Its only income is from the sale of Christmas Seals, 75% of which is retained by the local associations. 20% is used for State maintenance, and 5% is sent to the National Tuberculosis Association.

The affairs of the association are governed by a board of directors consisting of 59 persons from 31 different counties in the State; 26 of these are doctors and 33 non-doctors. County associations having certain qualifications are entitled to a representative on the board of directors. There are 11 such representative directors. Board members are elected at annual meetings to serve for a period of two years. The board elects from its membership an executive committee, which acts between meetings of the board of directors, and employs an executive secretary who conducts and supervises the affairs of the association as directed by the board of directors and executive committee. The executive secretary is assisted at the present time by a trained staff of five professional and four secretarial workers. The State Office is set up to meet the requirements of the various programs and activities of

the association. Records of all activities are kept up to date; supply service is maintained and the general functions of office routine are carried out.

Affiliated with the North Carolina Tuberculosis Association and having the same objectives are 153 organizations and committees throughout the State, 35 of which are organized into associations along the same lines as the State association. 20 of the local associations have paid executive secretaries.

The objective of all these organizations, composed of an army of doctors and public-spirited laymen, is the ultimate eradication of tuberculosis through prevention and control. This objective can never be accomplished without the loyal support, hard work and sacrifice of the many volunteer workers throughout the State who cooperate in carrying out the activities. When the epitaph on tuberculosis is written, these workers should be conspicuously credited with a great share of the accomplishment.

Tuberculosis is one of the most deadly enemies of mankind. It kills more persons between the ages of 15 and 45 than any other disease. In the period 1941-1945, tuberculosis killed a total of 7,477 persons from all ages in North Carolina. Thousands more were disabled and impoverished by its ravages and long years of treatment. It has ruined the careers of hundreds of North Carolinians, slowing them up, diverting them from their chosen work, forcing them to curb the bright fires of ambition.

A complete tuberculosis program is



not easily described. It is sort of a jig-saw puzzle with many major parts and much minute detail, cut up into a multitude of pieces. Many workers—doctors, nurses, educators, ministers and others—contribute in their own way, thereby making a complete tuberculosis program.

Some of the basic activities of the North Carolina Tuberculosis Association are:

#### **Co-ordination and Co-operation**

All of the program work of the North Carolina Tuberculosis Association is co-ordinated with the work of other agencies interested in public health and welfare. Among these agencies are State and local health and welfare departments, sanatoria, medical societies, schools and colleges, newspapers, radio, vocational rehabilitation, various clubs and organizations, and others.

#### **Field Service**

Members of the North Carolina Tuberculosis Association staff make frequent visits to local communities to assist local associations and committees on various phases of its control programs, program building and development, health education, rehabilitation, seal sale, special projects, case-finding, surveys and other services. They call upon individuals regarding tuberculosis work in their communities; make talks at public meetings, schools, clubs, and to special groups; attend committee meetings and help arrange for special meetings calling for services of special personnel. They work very closely with committees and chairmen in helping to form tuberculosis associations.

#### **Personnel Training**

The North Carolina Tuberculosis Association conducts institutes for the training of in-service executive secretaries and other employed personnel of local associations, and arranges for State and local workers to attend institutes and special training courses by the National Tuberculosis Association. It assists locals plan and conduct institutes and meetings providing special tuberculosis training for physicians, nurses, teachers, ministers, and public

health workers in general. It provides scholarships to Negro community health leaders at the summer schools of the University of Michigan and the North Carolina College for Negroes.

#### **Supply Service**

The North Carolina Tuberculosis Association buys materials such as leaflets, pamphlets, books, posters, films, etc. at wholesale price from the National Tuberculosis Association and distributes free or at cost to those requesting them. The only exception to this is the distribution of seal sale supplies—the cost of these items is shared on a 50-50 basis with local seal sale units.

#### **Publications**

The North Carolina Tuberculosis Association issues a monthly News Letter with a circulation of 1,000. Another publication, the NCTA Communiqué, is issued periodically to seal sale chairmen calling attention to activities and projects which need urgent handling.

Special reports are issued from time to time giving the public latest information concerning the work of the State association.

The monthly Bulletin of the National Tuberculosis Association is made available to a large number of people in the State as well as "The American Review of Tuberculosis," official organ of the American Trudeau Society. Abstracts on timely articles on tuberculosis are distributed to practicing physicians and published each month in the Journal of the North Carolina Medical Society.

#### **Newspaper and Magazine Services and Radio**

All newspapers in the State are supplied regularly with news articles on tuberculosis and news of interest pertaining to the field of health education in general. Regular health columns written by outstanding medical authorities throughout the United States on various kinds of health information are available to all papers in the State.

Close co-operation is maintained with magazines published in the State. Articles and materials for articles, in-

cluding pictures, mats and cuts, are furnished to State magazines, including professional, trade and industrial-employee publications.

Radio stations are supplied with information on the latest developments in the field of tuberculosis control. Series of health education programs are provided to radio stations as a part of their regular radio schedule. Transcriptions are furnished to all stations.

### **Film Service**

The North Carolina Tuberculosis Association shows health education and special movies at club movies, in schools and colleges, to professional groups and others whenever requested. It maintains a film library of both 16-mm and 35-mm health education sound films which responsible persons or groups may borrow at no cost.

### **Rehabilitation**

The North Carolina Tuberculosis Association carries on many rehabilitation activities of a promotional and educational nature and works with official and non-official agencies to extend and improve the service in North Carolina. Particular stress is placed upon co-operation with Veterans Administration in its work with tuberculous veterans. The North Carolina Tuberculosis Association urges local associations to undertake rehabilitation work and in some instances, helps them finance the work. It furnishes training through the National Tuberculosis Association for rehabilitation workers.

### **Legislation**

The North Carolina Tuberculosis Association studies existing State and National laws pertaining to tuberculosis and points out needed legislative changes which will bring about improvements in the fight to eradicate tuberculosis as well as provide greater aid to the victim of the disease.

### **Surveys and Statistical Service**

The North Carolina Tuberculosis Association is constantly studying changing conditions of local communities, studying programs, reappraising

activities and accomplishments, and obtaining the information needed in order to determine what new activities may be warranted, or where the program needs enlargement. It encourages the establishment of tuberculosis case-registers in counties and cities. It provides the public with authoritative tuberculosis information of a statistical nature through newspapers and magazine articles, special reports, addresses and answers to special requests.

### **Clinic and Nursing Service**

The North Carolina Tuberculosis Association assists local associations set up clinics and helps arrange and promote this type of work for localities not having a tuberculosis association or local health department.

Close co-operation is maintained at all times with the North Carolina Sanatoria and the North Carolina State Board of Health in helping to arrange and schedule mass X-ray surveys in industry, in schools, and for the general public.

In order to expand clinic services and generally to improve case-finding and follow-up activities, the North Carolina Tuberculosis Association urges local associations and committees to participate in, to the extent of financing, the employment of nurses to work under the supervision of local health departments. It also assists local associations in courses of training institutes, and symposia on tuberculosis conducted from time to time, especially for nurses.

### **Special Projects**

The North Carolina Tuberculosis Association annually conducts an essay contest for Negro students in high schools and colleges and promotes the Columbia Scholastic Press Contest which is open to all school papers in the State. Last summer it provided grants to the extent of \$3,000 to the School Health Co-ordinating Service for scholarships in health education to teachers at the University of North Carolina and at the North Carolina College for Negroes in Durham. It made a grant to the School of Public

Health of the University of North Carolina of \$1,000 to provide for a three weeks' course of instruction in tuberculosis control. Another grant of \$250 was made to the North Carolina College for Negroes to assist in the establishment of a course in public health education. Several small grants were made to local tuberculosis associations to help with rehabilitation projects. Teaching units and kits and other health education materials are supplied without cost to teachers and health educators.

The North Carolina Tuberculosis Association maintains as its chief aim the education of the public toward tuberculosis. All of its activities are directed either towards this aim or as demonstrations of better methods in

tuberculosis control. The year-round distribution of pamphlets, posters, general information, the showing of films, making talks and lectures, writing articles for newspapers and magazines, radio service, maintenance of advisory and consultant services, and the promotion of a varied program of activities are only a means to an end—the education of the public towards tuberculosis.

The work of the North Carolina Tuberculosis Association is not limited to race, creed, color, bank account or I. Q. It is often necessary to direct certain projects to special groups within the population, but in general all of the activities are for the people of the State who desire to see tuberculosis, one of the greatest scourges of mankind, eliminated from the earth.

## Why A Seal Sale ?

BY DANIEL W. JOSSELYN

Editorial Assistant, Bureau of Health Education  
Board of Health, Birmingham, Ala.

**I**N these fabulous days of machines faster than sound and atom bombs which destroy cities at a stroke, we sometimes forget that man's greatest achievement is his relative conquest of disease. The incredible powers of the human mind were largely aborted when the average length of life was some 18 or 20 years—as compared with our present 65.

In this relative conquest of disease, there are two main supporting pillars of the temple of our progress. Everybody knows one of them—the discovery of the germ theory of disease. Strangely, you might question a thousand and find none who could give the other main pillar a name.

But Dr. C. E. A. Winslow, Professor of Preventive Medicine, Yale University, describes the second pillar thus: "The discovery of popular education as

an instrument of preventive medicine by the pioneers of the tuberculosis movement has proved as far-reaching in its results as the discovery of the germ theory of disease."

And we give a name to the other main pillar—the Christmas Seal.

To understand the full significance of this discovery, we must recall the tremendous resistance to change inherent in the human race. The sad historical fact is that revolution, red and cruel and destructive, has usually been required to break the cast of ancestral habit. Even though smallpox killed some 60 million people in Europe alone in a single century, people "raved like maniacs" in opposition when offered the best and simplest of preventives—vaccination.

Tuberculosis is historically the worst of the diseases, killing an estimated



fourth of the population of the globe for centuries on end. And nowhere was public belief more firmly entrenched in the inevitability of disease and death. Conquering "consumption" was as hopeless as the world was flat before Columbus—you could see it with your own eyes, all around you. Even physicians agreed.

It would seem enough that the Christmas Seal gave light and heat to the crusade which changed the attitude toward tuberculosis, which has spared some three million priceless American lives within our memory. (Contrast poor India, with its million tuberculosis deaths a year, which had its first Seal Sale only a few years ago and only on a local basis.)

But the Christmas Seal is a hundred times more important as a vehicle for health education. For the first time, here was a practical way to change the fixed beliefs of mankind.

The secret? In America every year hundreds of millions of Christmas Seals go up and down and across the land. Each is more than a bullet against tuberculosis. Each is a bright ambassador of goodwill, and education, and good, good Democracy—of, for and by

the people themselves. Ten million volunteer hands, of their own goodness and understanding, join to fight a foe against which each alone is powerless.

Tuberculosis, today, though diminished by four-fifths, still kills more Americans than all other infectious and parasitic diseases combined. But there is this: we are now within reach of eradicating tuberculosis for all time. Every day we waste costs the people of America some 144 lives and over two million dollars! Even more Christmas Seals than ever before must now be brought to bear for the final push toward that precious freedom now within reach.

After tuberculosis? Alas, there are many foes. More Americans die of preventable causes every year than were killed in four years of the worst war of all time. Less than three-tenths of one per cent of us live to die of old age. Compared with the humble, ailing creature he now is, man can be as the plane to the ox cart. He awaits only the knowledge, which must be distributed long after tuberculosis is forgotten as the "captain of the men of death."

There must always be a Seal Sale.

## No Drug Yet For TB

By H. STUART WILLIS, M. D.

Director, Committee on Medical Research  
National Tuberculosis Association

IN man's survey of substances for use against tuberculosis almost innumerable drugs have been tried. Prior to five years ago, every one of them was a flat failure and every one has gone into the limbo of forgotten things. However, work with various sulfa drugs in different parts of the country showed some promise and, for the first time, it appeared that we might really begin to hope that a drug cure for tuberculosis could be found.

When tuberculous guinea pigs were treated with these drugs, the progress of the disease was modified. The diseased area was smaller than had been expected and regressed or scarred in nature. Some of the drugs prevented the disease from developing as long as the drug was given, but the tuberculosis progressed and killed as soon as the drug was withheld. These drugs are altogether too toxic to be continued in man for a long period. Besides,

they do not produce the favorable effect on human tuberculosis that they do in animals.

The coming of streptomycin has been an interesting and promising development because it appears to modify—but cannot cure—tuberculosis favorably. This drug is under study in several places throughout the country, notably at the Mayo Clinic, Rochester, Minn.; the Saranac Laboratory, Saranac Lake, N. Y., and the National Institute of Health, Bethesda, Md. From the studies so far made on animals, streptomycin appears to give considerable protection against tuberculosis—not complete, but more than any other drug has ever given. It is not, however, a cure.

Streptomycin has been used in the treatment of several people with tuberculosis, most of whom have been helped. But the disease returns to its former state when streptomycin is

withdrawn. No one has been cured by streptomycin and no proof exists that anyone will be cured. Active study of the drug by chemists and physicians proceeds in the hope that sooner or later a substance related to streptomycin will be found which will really cure.

At present, streptomycin stands out as a landmark on the road toward a cure. It is a remarkable drug which is receiving exacting care. Until the proper substance is found, however, we should continue to use all the accepted methods of treatment which, in so many cases, do great good.

And we should continue wholeheartedly to support the Seal Sale drives and all other movements to forward the campaign against tuberculosis. There will be plenty of time to relax in our efforts if and when a cure is actually here.

## 1946 Christmas Seal

BY LATHAM L. MILLER

Director of Program

North Carolina Tuberculosis Association

Raleigh, N. C.

A lamplighter, symbolic of the returning hope of the world, is featured on the 1946 Christmas Seal. The Seal was designed by Lloyd Coe, well known artist and illustrator.

Each sheet of 100 seals carries a block of four special seals in the likeness of four persons who were largely responsible for the success of the first American Seal Sale in 1907. These portraits are of Jacob Riis, Miss Emily Bissell, E. A. Van Valkenberg, and Leigh Mitchell Hodges.

Funds raised from the sale of these seals are spent primarily for preventive and control measures rather than for the actual care of the tuberculosis. The latter is beyond the means of private

agencies. If, for example, all the 1945 Christmas Seal money raised in the United States—\$15,500,000—was spent in caring for the 500,000 persons in this country estimated to have active tuberculosis, the money would cover approximately one week's care only for each patient. That is why a large proportion of Christmas Seal money is spent to educate the individual and the community in the principles of tuberculosis prevention: to purchase X-ray equipment and to promote mass examinations; to provide special training for professional and lay persons; to encourage the use of trained people by health departments, sanatoriums, and tuberculosis associations; to promote

rehabilitation services: to tuberculin test school children: to establish clinics, and many other services necessary in the overall program to control and eradicate tuberculosis. For control of the already known cases and prevention of new cases is the way Christmas Seals fight tuberculosis.

To carry out this program, it is nec-

essary to get people to help by giving them the facts, the need and the urgency. The tremendous gains already achieved by Christmas Seals should be told to them and also the fact that there is still a long way to go which can be covered more quickly by the public's purchase of Christmas Seals.

## Tuberculosis As A World Problem

By F. D. HOPKINS, Executive Secretary  
National Tuberculosis Association  
Raleigh, N. C.

ALL the evidence indicates that tuberculosis is a serious problem in many parts of the world. Two recent visitors from Europe have stated that the outstanding health problems there are malnutrition and tuberculosis. When it comes to actual number of deaths, the situation is even graver in the Far East than in Europe. At the annual meeting of the National Tuberculosis Association in June, Dr. James A. Doull, Chief, Office of International Health Relations, U. S. Public Health Service, estimated that there were more than 3,000,000 deaths annually in the world from all forms of tuberculosis, with a possible total of 5,000,000. In June a visitor from India reported 600,000 deaths annually in that country.

It is encouraging that the first world conference called by the United Nations was to form a World Health Organization. This Conference opened in New York on June 19. Time is needed, however, to organize public health on a world scale and the opening conference could do little more than create an organization, choose a site for the office of the secretariat, elect a Secretary-General and start the wheels for future operations. The hope that this agency will establish a well-staffed division of tuberculosis must await action by the Interim Commission set up to function

until such time as a permanent organization can come into being through concurrence of the governments concerned.

Since 1940 the International Union Against Tuberculosis, with its office in Paris, has not functioned but is now beginning to correspond with the organizations and governments that constituted the 43 members prior to the war. Looking back, it is not difficult now to realize that the Union, as it operated prior to 1940, cannot meet present needs. This is easy to say, but reorganizing the Union to make it more effective is difficult. A first step should be to bring it into working relationship with the World Health Organization as provided in the Charter of that organization, which plans to work not only with the other specialized agencies of the United Nations but also with a number of voluntary international associations.

The matter of financial support will be difficult in view of the poverty of many nations. At the Buffalo meeting, Dr. Doull made an interesting suggestion when he proposed that perhaps the several nations using the Seal method for financial support might arrange to appropriate a small part of such income for international purposes. Dr. Doull proposed also that the



# Deaths from Tuberculosis by County and Race: 1945

R - Respiratory — O - Other — T - Total

COUNTY	PLACE OF DEATH						PLACE OF RESIDENCE					
	R		O		T		R		O		T	
	W	C	W	C	W	C	W	C	W	C	W	C
Alamance	3	3	---	---	3	3	4	3	---	1	4	4
Alexander	3	1	---	---	3	1	6	1	---	---	6	1
Alleghany	1	---	---	---	1	---	1	---	---	---	1	---
Anson	---	2	---	---	---	2	---	3	---	---	---	3
Ashe	1	---	---	---	1	---	2	---	---	---	2	---
Avery	2	---	1	---	3	---	1	---	---	---	1	---
Beaufort	3	5	---	1	3	6	6	10	---	3	6	13
Bertie	1	4	---	2	1	6	2	6	---	4	2	10
Bladen	1	1	---	1	1	2	2	4	---	2	2	6
Brunswick	1	---	---	---	1	---	---	1	---	---	---	1
Buncombe	209	115	6	6	215	121	29	22	1	2	30	24
Burke	8	2	---	---	8	2	3	3	---	---	3	3
Cabarrus	3	1	1	2	4	3	5	3	2	2	7	5
Caldwell	3	2	---	---	3	2	6	2	2	---	8	2
Camden	---	1	---	---	---	1	---	3	---	---	---	3
Carteret	3	---	---	---	3	---	7	---	---	---	7	---
Caswell	---	1	---	---	---	1	1	3	---	1	1	4
Catawba	3	1	---	---	3	1	6	3	2	---	8	3
Chatham	2	2	---	1	2	3	4	4	---	2	4	6
Cherokee	2	1	---	---	2	1	2	1	---	---	2	1
Chowan	---	3	---	---	---	3	1	7	---	---	1	7
Clay	1	---	---	---	1	---	1	---	---	---	1	---
Cleveland	3	2	---	---	3	2	6	6	---	---	6	6
Columbus	1	5	---	---	1	5	5	10	---	---	5	10
Craven	1	11	---	2	1	13	4	22	---	3	4	25
Cumberland	4	15	3	4	7	19	7	20	1	3	8	23
Currituck	---	---	1	---	1	---	2	---	1	---	3	---
Dare	1	---	---	---	1	---	1	---	---	---	1	---
Davidson	2	3	---	---	2	3	5	6	1	---	6	6
Davie	---	---	---	---	---	---	1	---	---	---	1	---
Duplin	2	3	1	---	3	3	2	5	1	---	3	5
Durham	25	23	6	7	31	30	19	24	5	4	24	28
Edgecombe	5	11	---	3	5	14	6	14	---	1	6	15
Forsyth	17	44	6	1	23	45	20	46	2	1	22	47
Franklin	---	1	---	---	---	1	3	5	1	---	4	5
Gaston	2	6	1	1	3	7	3	9	1	---	4	9
Gates	1	1	---	---	1	1	1	1	---	---	1	1
Graham	---	---	---	---	---	---	1	---	---	---	1	---
Granville	---	3	1	1	1	4	1	4	---	2	1	6
Greene	1	1	2	1	3	2	3	2	2	2	5	4
Guilford	15	18	1	3	16	21	19	20	---	3	19	23
Halifax	9	10	1	1	10	11	13	13	1	1	14	14
Harnett	6	---	---	---	6	---	6	1	---	---	6	1
Haywood	---	---	---	---	---	---	2	1	---	---	2	1
Henderson	5	1	---	---	5	1	7	---	---	---	7	---
Hertford	1	4	---	---	1	4	1	8	---	---	1	8
Hoke	31	106	---	6	31	112	2	5	1	---	3	5
Hyde	---	1	---	---	---	1	---	3	---	---	---	3
Iredell	2	5	1	---	3	5	3	6	---	---	3	6
Jackson	3	---	1	---	4	---	3	---	---	---	3	---
Johnston	8	1	1	---	9	1	11	1	1	1	12	2

## Deaths from Tuberculosis by County and Race: 1945

R - Respiratory — O - Other — T - Total

COUNTY	PLACE OF DEATH						PLACE OF RESIDENCE					
	R		O		T		R		O		T	
	W	C	W	C	W	C	W	C	W	C	W	C
Jones	1	2	---	---	1	2	1	4	---	---	1	4
Lee	1	2	---	---	1	2	2	5	---	---	2	5
Lenoir	10	9	---	---	10	9	10	19	---	1	10	20
Lincoln	---	---	---	---	---	---	---	2	---	---	---	2
McDowell	2	1	---	---	2	1	2	1	---	---	2	1
Macon	2	---	2	1	4	1	2	---	2	1	4	1
Madison	1	---	1	---	2	---	2	---	1	---	3	---
Martin	3	18	1	---	4	18	3	17	1	1	4	18
Mecklenburg	21	31	2	1	23	32	20	34	---	---	20	34
Mitchell	3	---	---	---	3	---	3	---	---	---	3	---
Montgomery	---	---	---	---	---	---	---	2	---	---	---	2
Moore	1	2	---	---	1	2	3	6	1	---	4	6
Nash	6	10	1	5	7	15	8	10	1	3	9	13
New Hanover	4	8	1	1	5	9	5	11	1	2	6	13
Northampton	1	3	---	1	1	4	2	10	---	1	2	11
Onslow	1	1	1	1	2	2	3	1	---	---	3	1
Orange	1	1	1	---	2	1	1	3	1	---	2	3
Pamlico	---	1	---	1	---	2	1	1	---	1	1	2
Pasquotank	2	6	2	1	4	7	5	9	2	1	7	10
Pender	1	2	---	---	1	2	2	3	---	---	2	3
Perquimans	---	1	---	---	---	1	---	1	---	---	---	1
Person	2	---	---	---	2	---	4	1	---	1	4	2
Pitt	6	18	---	---	6	18	12	26	---	2	12	28
Polk	2	---	---	---	2	---	3	---	---	---	3	---
Randolph	1	---	---	---	1	---	3	2	---	1	3	3
Richmond	---	3	---	---	---	3	2	6	---	---	2	6
Robeson	3	5	---	3	3	8	6	16	1	3	7	19
Rockingham	5	1	1	2	6	3	10	3	1	2	11	5
Rowan	5	6	---	1	5	7	7	9	1	1	8	10
Rutherford	4	2	---	---	4	2	4	2	---	---	4	2
Sampson	1	2	---	---	1	2	2	8	---	1	2	9
Scotland	2	4	---	1	2	5	2	9	---	2	2	11
Stanly	9	4	---	---	9	4	9	4	---	---	9	4
Stokes	---	1	---	---	---	1	---	1	1	---	1	1
Surry	6	1	1	---	7	1	9	1	2	---	11	1
Swain	1	1	---	1	1	2	1	1	---	1	1	2
Transylvania	---	---	---	---	---	---	---	---	---	---	---	---
Tyrrell	1	1	---	1	1	2	1	1	---	---	1	1
Union	4	1	1	---	5	1	5	5	1	---	6	5
Vance	3	5	---	---	3	5	3	6	1	---	4	6
Wake	25	19	2	4	27	23	18	27	---	3	18	30
Warren	---	4	---	---	---	4	1	6	---	---	1	6
Washington	---	1	---	---	---	1	1	3	---	---	1	3
Watauga	---	---	---	---	---	---	---	---	---	---	---	---
Wayne	1	56	1	1	2	57	3	13	1	1	4	14
Wilkes	4	---	1	---	5	---	6	---	2	---	8	---
Wilson	20	59	1	2	21	61	7	33	1	2	8	35
Yadkin	---	---	---	---	---	---	1	1	---	1	1	2
Yancey	5	---	---	---	5	---	5	---	1	---	6	---
Total	566	712	54	71	620	783	446	634	48	70	494	704
Total	1278		125		1403		1080		118		1198	

International Union should promote research, the education of the public regarding tuberculosis, the establishment of diagnostic and other standards and exchange of information. Emphasis should be placed, he said, upon the holding of international congresses.

The Board of Directors of the National Tuberculosis Association realizes fully the urgency of the situation and has instructed the office to take part in any plans for the development of an international program at the earliest possible moment.

## A Woman Did It

BY FRANK W. WEBSTER, Executive Secretary

North Carolina Tuberculosis Association, Raleigh, N. C.

**H**ELP was needed. And so the doctors turned to a woman. She acted—and eight lives were saved.

It was nearly 40 years ago and a group of doctors in Delaware were treating eight patients ill with tuberculosis. They were trying a treatment which was novel in those days but does not seem strange to us today.

The doctors believed they could bring their patients back to health if the latter could obtain proper rest long enough to permit their diseased lungs to heal. A small shack on the Brandywine River had been found for the patients.

Everything was going along nicely when the doctors' funds ran out. The patients were not wealthy. They could not afford to pay for treatment. The doctors wanted no fees for themselves. When they undertook to treat the patients they knew it would bring no financial reward. There were certain expenses which had to be met, however, and the doctors had reached the end of their resources. Only \$300, they estimated, would enable them to continue the treatment through another winter—long enough to tell whether the patients would live.

The doctors needed help. So what did they do? They turned to a woman. They literally dumped their problem in her lap and turned away, confident that she would not fail them.

And she did not not fail them. The woman was Miss Emily P. Bissell, a welfare worker of Wilmington, Del. She agreed to raise \$300. She did not

have the vaguest idea where she would get the money, but get it she would.

The Christmas season was approaching. Miss Bissell thought and thought. Then, suddenly, she remembered something she had read some months before. Christmas? Christmas Seals—that was it! Back in July Miss Bissell had read an article in *THE OUTLOOK*. Jacob Riis, author of the article, had told how Denmark, his native country, had begun to sell Christmas Seals in 1904 to raise funds to build hospitals for tuberculosis children. Mr. Riis had pleaded for a Christmas Seal Sale in America to raise funds to fight tuberculosis, the leading cause of death in this country at that time.

If Denmark could have a Christmas Seal Sale, Miss Bissell decided there was no reason why Wilmington could not have one. Surely, she thought, through a Seal Sale she could raise enough money to help the doctors through this critical winter.

Mr. Riis had pleaded for action. Miss Bissell acted. She sketched a design and took it to a printer. He kindly agreed to print the Seals on credit. She made plans for selling them. The editor of the *NORTH AMERICAN*, a Philadelphia newspaper, and a columnist on that paper heard of Miss Bissell's idea. They liked it and decided to help her. They publicized her Seal Sale in the paper—and the Seals sold like hot cakes. At the end of the holidays, Miss Bissell turned over \$3,000 to the doctors.





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DECEMBER, 1946

No. 12



As a token of their esteem, the North Carolina Public Health Nurses present Dr. George M. Cooper with a chair. Standing, left to right: Mrs. H. P. Guffy, Mrs. G. M. Cooper, Miss Flora Ray, and Miss Pearl Weaver.

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# THE Health Bulletin

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

## Nutrition Committee

*By*

GOVERNOR R. GREGG CHERRY

THE North Carolina Nutrition Committee furnishes a conspicuous example of what can be accomplished through cooperative effort between official and unofficial groups. Composed as this committee is, of representatives of public health, education, agriculture, and other State and Federal agencies that have to do with our everyday life, it has demonstrated the value of singleness of purpose and has set an example which is not only commendable, but which might well be followed to advantage all through our governmental system.

This committee has proved that there can be cooperation without duplication of effort; that contributions to the bigger things of life can be made without detracting from the prerogatives of those making such contributions. In brief, it has shown that the forces of public health, education, agriculture, and other participating agencies, official and voluntary, can all serve one common purpose, in the stratosphere above personal interests and self aggrandizement.

Therefore, I heartily commend you for what you have accomplished, endorse the program which you have executed so well up to this time, and express my confidence that you will continue your constructive efforts, designed to help make North Carolina one of the healthiest States in this

Union, through the use of the foods which we produce in such great abundance.

As far back as 712 B.C., the Prophet Isaiah, writing in the Old Testament asked a question to which this committee has been given a new meaning: "Wherefore do you spend money for that which is not bread, and your labour for that which satisfieth not?" The old prophet may not have known anything about what we now know as "hollow hunger" and "hidden hunger," but he did know that his people were not always getting value received for their earnings.

The science of nutrition has revealed to us that it is not so much a question of how **much** we eat, but how **well** we select what we eat. As your chairman, Doctor Reynolds, so aptly put it, in a magazine article on pellagra: "A housewife with \$5 to spend might conceivably provide more of the right kind of food for the members of her family than one with \$20." While he conceded that adverse economic conditions might well promote the incidence of pellagra—a disease resulting from poor selection of foods—he declared that this need not be the case. "In fact," he went on, "such condition might even prove a blessing, by bringing people face to face with the necessity for eating not necessarily the more expensive foods, but enough of the 'Basic Seven,'



every single day, to furnish the body with all the nutrients necessary to its proper growth and development."

When old Nebuchadnezzar was forced to graze with the cattle and go on a grass diet, he was really getting all the essential food requirements, but he did not know it. Often when we eat fancy food, at fantastic prices, we are NOT getting the nutrients we should have. Therefore, Nebuchadnezzar was better off than some of us.

All of us, doctors and laymen alike, now know that good nutrition is necessary not only to keep the body strong and healthy, but in the treatment of many diseases, including pellagra and such wasting diseases as tuberculosis. In educating the public to this important fact during the period of the war this committee has rendered a valuable service. Hence, the further expansion of your activities is highly desirable for the postwar period.

Although the foundations for a national nutrition program had been started prior to 1941, activities on a more intensive basis began that year, following the National Nutrition Conference, held at the White House in Washington. It was in 1941 that North Carolina organized its State Nutrition Committee, consisting of representatives of thirty-three agencies, seven official and twenty-six voluntary. Your record has fully justified the efforts you have exerted. I dare say that the way has not always been easy, in that you have had to combat and overcome ignorance and indifference, in many instances.

As I understand it, this committee emphasizes six major activities: publicity, food production and its transportation under proper condition, food conservation, nutrition services by public health personnel, nutrition education, and nutrition in industry. Local committees have been set up throughout the State, and this fact alone bespeaks intelligent procedure on your part, as good health is where you find it. After all, the local community must be reached if any movement is to become fully effective.

I am impressed by the fact that the objectives you are seeking are simple and direct. Furthermore, the agencies represented on this committee are in a position to furnish intelligent and efficient workers for the attainment of your objectives. You have in this group a happy combination.

We must realize that good nutrition is not only necessary to good health, but also to a sound economy and an effective educational system. Bad nutrition promotes absenteeism in industry and repeaters in our schools, in that it is an ally of poor health. This means added expenditures which might be avoided. If money spent on repeaters could be saved, it would mean just that much more for the normal processes of education. Absenteeism, from whatever cause, means a loss of revenue, both to management and labor.

In the promotion of good nutrition, you are not only making a sound contribution to health, but also to industry and agriculture, and to the social order in general.

Back in the old days when pellagra was the shame of the South, we associated that disease with "cornbread and fatback," both fine "vituals" in their place, but lacking in nutrients necessary to the proper balance of the human make-up. We did not know much those days about "hollow hunger" or "hidden hunger" and the word "nutrition" simply appeared in the dictionary, while few were able to define it. Of the 73,234 deaths from pellagra that occurred in the United States from 1925 to 1940, 28,220 occurred in the South Atlantic States, which include North Carolina. In 1929, for example, pellagra deaths in the South Atlantic States totaled 3,299; in 1940, the number had dropped to 731. Last year, that is, 1945, there were only 72 such deaths in **North Carolina**, as compared with 953 in 1929.

I mention pellagra in this connection because it is a disease which almost all well-informed persons now know is a disease that can be both prevented and cured by eating the right kinds of food.

Malnutrition not only has its **direct**, but also its indirect influence upon the human body. It is not only conducive to the incidence of pellagra, for example, but also has its bad effects upon the teeth, nerves, muscles and other parts of the human body. Good nutrition, on the other hand, is a body builder.

I shall not undertake to discuss with you, who are experts in your field, just what foods we should eat to promote good health. My purpose in addressing you today is not to give a lesson in nutrition or dietetics, but to commend you for the progress you have made and to express the hope that your efforts will be still further rewarded. Good nutrition is definitely a public health problem—and it is also an educational, economic, agricultural, and industrial problem—hence a State problem. That is why the spirit of cooperation which you are manifesting is so important and so praiseworthy. The way may not have been easy for you at all times, but you have been persistent and the results of your work have begun to reveal themselves in no uncertain terms.

Each of the agencies represented here is in a position to make continuing contributions to this important phase of mass protection. Each is in an ex-

cellent position to help promote the program in which you are engaged.

We are all thinking in terms of good health in this new day — and good health, in turn, is dependent upon many factors, but none of these is more important than good nutrition; for, after all, sound bodies should house the sound minds that must guide us in the future, if we are to pursue paths of usefulness in building an order that will withstand the onslaught of the enemies of a democracy that beset us on all sides. If we can ride this storm of post-war unrest, on the crest of which we now appear to be; if we can overcome the forces of greed and selfishness that have manifested themselves in recent days, our Republic and the forty-eight States that comprise it, will rise to heights of service and usefulness heretofore undreamed of. Humanity today is thinking more **ABOUT HUMANITY** than ever before—and there is, among thinking people, a renewed determination to overcome “man’s humanity to man,” which, in the past, has “made countless thousands mourn.”

Good health is necessary to this end; good nutrition is necessary to good health. I, therefore, say to you: Let the good work go on.

## Dr. Paul Pressly McCain

*By*

WILLIAM H. RICHARDSON

North Carolina State Board of Health

**I**N the tragic death of Dr. Paul P. McCain, preventive and curative medicine have suffered an irreplaceable loss and humanity a true friend. His contributions to the fight against tuberculosis in North Carolina have been unsurpassed. His vision of the needs of the people was clear, and his approach to the problem about which he was **most** concerned was always practical. His life was dedicated to the

suffering masses. In his official capacity, and as a soldier, serving in the medical field, he gave science and humanity all he had—until the end.”

In these words, Dr. Carl V. Reynolds, State Health Officer, paid tribute to the man whose death, on November 25, as he was enroute to Raleigh, to attend a meeting of the Medical Care Commission, brought genuine sorrow to the hearts of thousands, throughout

the length and breadth of North Carolina.

Doctor McCain was a man of vision, faith, and positive action. The contributions which he and the institution he headed made to the fight against tuberculosis in North Carolina have been outstanding. He kept pace with the advancement of preventive and curative medicine, but he out-distanced the casual worker by many leagues, because the inner fires burned in his breast. He entered into the fellowship of suffering known only by the victims of tuberculosis; and, as he won his fight, he helped others to win. He demonstrated not only that tuberculosis can be brought under control, but that the patient, by observing certain rules, need not be a carrier of that disease.

Born in Due West, South Carolina, on June 26, 1884, he received his A.B. degree in 1907 from Erskine, where his father was professor of English for more than 50 years. In 1911, he received his M.D. degree from the University of Maryland, and in 1936, the University of North Carolina conferred upon him the degree of LL.D.

He assumed his duties as assistant superintendent and chief of the medical service at the North Carolina Sanatorium, on March 1, 1914 and continued in that capacity until the resignation, in January, 1924, of Dr. L. B. McBrayer, whose daughter, Sadie Lou McBrayer, he had married on October 17, 1917. When Doctor McBrayer resigned, Doctor McCain became superintendent and medical director of the North Carolina Sanatorium, and director of the Sanatorium's extension department, in which capacity he won great distinction.

During his long and useful career, Doctor McCain was accorded many honors, in both State and Nation, by organizations with which he was affiliated. He was regarded as one of the most eminent authorities on tuberculosis — and administration — in the United States.

He always maintained an active relationship with the Medical Society of

the State of North Carolina, of which he was president in 1935; and in 1940, he was elected to head the National Tuberculosis Association.

Dr. McCain, an elder in the Presbyterian Church, always found time to attend to his religious duties, and was interested in the educational activities of the church, as evidenced by the fact that he was elected a member of the Board of Trustees of Flora MacDonald College, in 1918. He also founded the Raeford Kiwanis Club.

Doctor McCain's work in behalf of tuberculosis sufferers was not without its reward. In 1914, the year he first became officially connected with the North Carolina Sanatorium, there were 139.3 deaths from tuberculosis in this State each year for every 100,000 population; in 1924, the year he became superintendent, there were 99.1, and in 1944, the rate had dropped to 36.9, for every 100,000 inhabitants of the State, a decline of around 102 points.

During the more than 30 years of his life devoted to combating tuberculosis, Doctor McCain saw the number of beds at Sanatorium increased from 35 to 650—the establishment of two additional sanatoria, one at Black Mountain, in the west; the other at Wilson, in the east—and until he met his tragic death, he was pressing for additional space and giving active assistance to the case-finding program now being carried on by the State Board of Health, to facilitate early diagnosis and treatment.

To undertake to evaluate the work of Doctor McCain in a few hundred words would be futile. His life and his services to the people of North Carolina might well furnish the material for a sizeable volume. His official services are, of course, a matter of record, that is, so far as such services are written into the minutes of board meetings—but there was much more to Paul McCain than that which can be written down on paper. His real record is written on the hearts of those he served and those for whom he spent his life, after maturity, in a continuing effort



to build bigger and better facilities for curing and checking the spread of tuberculosis.

This was demonstrated at his funeral, which was held in the dining room of the institution he headed at the time of his death. The rites over his mortal remains were simple, in keeping with the disposition and wishes of the man whose favorite passage of Holy Scripture was the fourteenth chapter of the Gospel according to Saint John: "Let not your heart be troubled."

There was no eulogy, and the only music was the vocal rendition of "The Lord's Prayer," by a prominent North Carolina Physician.

For more than an hour before the formal service, a steady stream of men and women—the high and the low, the rich and the poor—passed by the casket to look upon the mortal remains of one whom they had loved in life. Prominent physicians were there, and men of other professions and callings; neighborhood folk from Hoke and the adjoining counties; patients in the Sanatorium, some

fully clad, others wearing bathrobes they had put on leaving their cots for a brief farewell look at the man they had known as a tender, sympathizing, encouraging friend; white and Negro attaches of the institution—doctors, nurses, laborers, they all joined in a silent tribute, walking with measured tread, many with tear-stained faces.

And then, when the services at the Sanatorium had been concluded, the body was taken to old Bethesda cemetery, at Aberdeen, and committed to rest beneath the shade of the trees. Only a few feet away is the tomb of the late Walter Hines Page, distinguished Ambassador to the Court of Saint James, during the first World War. Walter Page, Ambassador to the Court of Saint James; Paul McCain, ambassador who brought healing and rehabilitation to sufferers from tuberculosis. With such men as this in charge of so great a work, it may well be said to those to whom he ministered and those he inspired to minister after him: "Let not your heart be troubled."

## Child Dies of Milk Sick Poisoning

*By*

B. B. McGUIRE, M.D.

District Health Officer, Burnsville, N. C.

**H**OYLE JOHNSON, three year old son of Mr. and Mrs. Lillard Johnson of the Vale section, near Newland, N. C., died at Grace Hospital, Banner Elk, November 8th of milk sick poison.

This death brings to us the realization that this disease has not been considered a public health problem. Any disease so serious, or which may be prevented should be considered a public health problem. Certain facts herein should be known by the public, as well as by the profession of medicine.

The disease "Milk Sick" has been known for a hundred years or more in the southern Appalachian mountain region and has always been recognized

as a serious disease in human beings as well as animals. It was learned many years ago that cattle, horses and sheep will die of it, except cows giving milk. The causative agent was known to be secreted in the milk and the cow would not die. It was determined that sweet milk and butter from the cows would cause the illness, and that buttermilk would not. These correct observations prove that the poison was contained in the cream.

A few years ago the U. S. Department of Agriculture conducted experiments which resulted in the discovery of a yellowish oil of sweetish odor which causes this disease. This oil was named

tremetol. These experiments proved further that white snake root and Jimmie weed contain this oil, and that animals eating these weeds develop milk sick. The weeds are poisonous if eaten green as well as dried. Hay containing them will cause the disease in winter. These weeds can be found in most of western North Carolina, as well as other areas of the southern Appalachian mountains. Most of them grow in dark north coves, usually on steep hills and are found near water or small streams.

Animals usually will not eat these weeds in the summer when the grass is green and luxuriant. When the grass begins to die in the fall, animals begin to eat these weeds, so this disease is a fall-of-the-year disease.

For the reason that doctors are scarce, and that many cases of this disease ingest only a small amount of poison and hence do not see a doctor at all, I will give a few points on the diagnosis: The constant and overshadowing symptom is nausea, a terrifying and uncontrollable nausea and burning in the stomach. Foods, liquids, anything taken into the stomach is immediately thrown out. There is no pain, no fever, no intestinal movement, in fact, there is constipation. Later there is dehydration, starvation and a terrific acidosis with a sweet diacetic acid and acetone breath permeating the room. No wonder old Doctor Brabson of Macon County used to say when entering a room with the disease, "Milk sick and plenty of it." Even a layman can make the diagnosis from this odor.

Frequently a large number of children or adults in a family will have the disease at the same time with a varying degree of severity. Some will ingest too small an amount of the poison to become ill except enough to

vomit for a day or two, while others may eat enough to become fatal.

The laity treated the disease with brandy, preferably peach. They would gorge the patient with it, some to the point of complete intoxication for some days.

In a hospital there is no specific antitoxin or antedote for this poison. Glucose intravenously, saline by hypodermoclysis, and symptoms as they will arise.

From a public health standpoint what can be done to prevent illness and death from this disease? Many animals in this area die from it. In the past three weeks three fine horses have died and all have been diagnosed by graduate veterinary surgeons.

I feel that in areas where it has been known to occur, it seems feasible for people to see their county agents and familiarize themselves with these weeds so that they will be able to recognize them at once, and if found in the fields they should either be dug up by the roots, or the areas fenced away from livestock. The Health Department knows certain individuals in different communities who can recognize these weeds and will be glad to furnish this information.

No field where these weeds are known to grow should be mowed for hay until the weeds are removed. Fortunately they usually grow under timber in dark, wet places along small streams, and therefore are not usually cut for hay.

In case of vomiting, constantly or at intervals, in either children or adults who drink milk and eat butter, a doctor should be seen as early as possible.

Perhaps the above remarks concerning the diagnosis of milk sickness may be of value to young doctors who are not taught this disease in medical schools.

# Renewed Interest In Tuberculosis

*By*

T. F. VESTAL, M.D., Director

Division of Tuberculosis

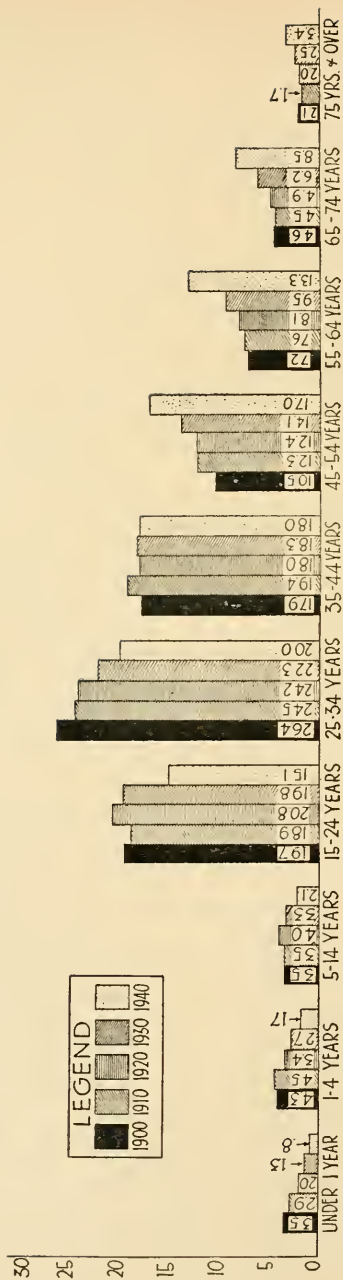
North Carolina State Board of Health

THE season of the year has again rolled around when custom has taught us to think in terms of Christmas seals. Christmas seals have long been associated with the discovery and treatment of tuberculosis. This year as never before finds the general public tuberculosis conscious. This is true not only in North Carolina but throughout the Nation as a whole. The physical examinations necessary to determine physical fitness for military duty during the war revealed, in many instances, serious defects in many of the young men and women throughout the country. These defects in too many instances were due to tuberculosis. In many cases the disease was entirely unknown even to the individual in question until brought to light by the induction board. This serious state of affairs existed not only in North Carolina, but throughout the whole of the Nation. Public Health officials and others interested in the health and well being of the population as a whole began asking themselves for an answer and a practical solution of the problem that was or should be so vitally important to all. Health departments, tuberculosis associations, civic clubs, churches, chambers of commerce and many other organizations began asking what could be done. Health associations have been formed, and these have solicited and obtained the support of radio and screen stars who have given generously of their money and talent in the interest of publicizing the importance of the better health movement. A widely known columnist who conducts a weekly radio program heard all over the Nation is now plugging his Sunday night programs in the interest of the fight against venereal

diseases. A few years ago this daring innovation would have been so shocking that no one would have dared attempt it. Now the regular clinics of some of our health departments are announced from the Sunday morning pulpit. Indeed, there has been a genuine and widespread awakening in the interest of better health. And it certainly is high time. The public is awakening as never before in the history of the country.

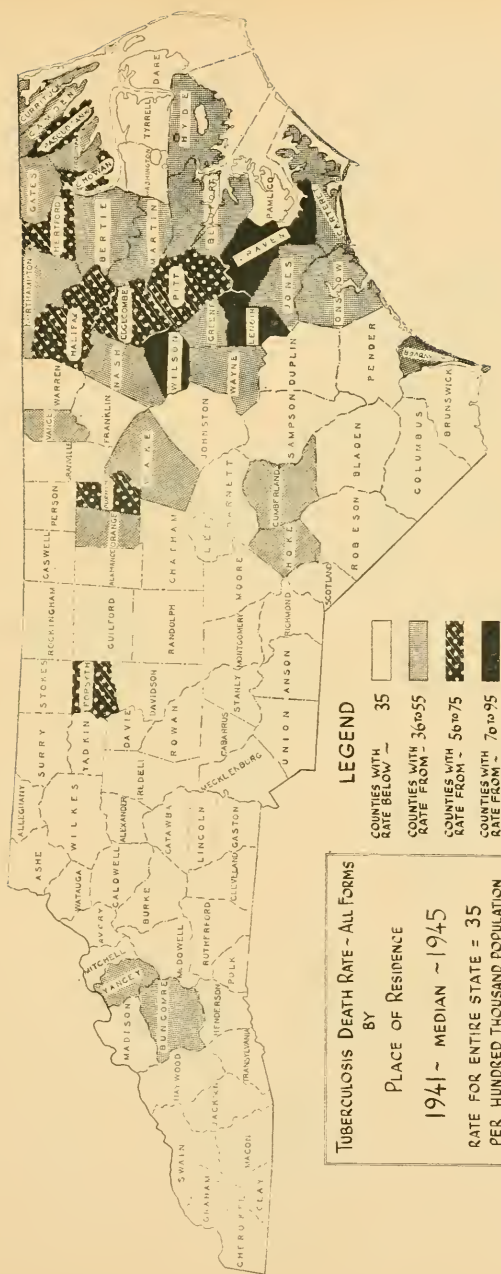
One of the outgrowths of all this widespread and new interest in public health is the so-called mass survey of the entire population. The entire population of cities has been included in a mass survey. In some cases this mass survey has included both blood examinations and chest X-ray examinations; in others it has been confined to chest X-ray examinations. In this state attempts have been made to include the adult population of entire counties and with excellent results. Up to eighty-five per cent of the adult population of an entire county voluntarily came in for chest X-ray examinations. These films have been studied, and the results turned over to the various health departments and family doctors. A glance at the accompanying chart will indicate the cause for the present interest in the adult. This chart shows the death rate from tuberculosis by age groups. The abrupt rise in the death rate at age fifteen is most outstanding. It should also be noted that at age forty-five and above there has been a rise in the death rate over the last forty years. This rise has been especially marked in the last ten years. It is the adult—not the child—who is responsible for the spread of the disease. In all too many instances it is





Graph 4: Percentage Distribution of Tuberculosis Deaths (all forms) by Age for the Census Years 1900, 1910, 1920, 1930 and 1940

(Source: Dept. of Com. Vit. Stat., Vol. 16, July 16, 1942, No. 7, p. 20.)



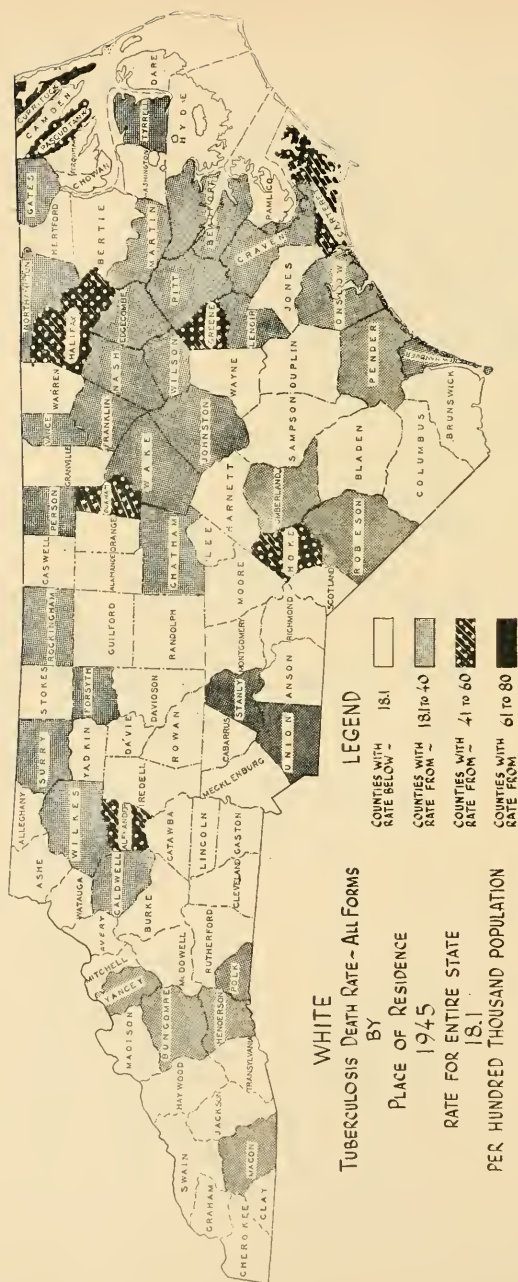
# TUBERCULOSIS DEATH RATE - ALL FORMS

BY

PLACE OF RESIDENCE

1941 ~ MEDIAN ~ 1945

RATE FOR ENTIRE STATE = 35  
PER HUNDRED THOUSAND POPULATION





**NON - WHITE**

**TUBERCULOSIS DEATH RATE-ALL FORMS**

BY  
**PLACE OF RESIDENCE**  
**1945**  
**RATE FOR ENTIRE STATE**  
**66.6**  
**PER HUNDRED THOUSAND POPULATION**

**LEGEND**

COUNTIES WITH RATE BELOW ~ 66.0

COUNTIES WITH RATE FROM ~ 67 to 100

COUNTIES WITH RATE FROM ~ 101 to 200

COUNTIES WITH RATE FROM ~ 201 and UP

TUBERCULOSIS DEATH RATE-ALL FORMS

PLACE OF RESIDENCE

1945

RATE FOR ENTIRE STATE

66.6

PER HUNDRED THOUSAND POPULATION

### LEGEND

COUNTIES WITH  
DATE BELOW -

66.0

COUNTIES WITH  
DATE FROM 1900

To 100

COUNTIES WITH  
STATE ECOM-

to 200

COUNTIES WITH  
STATE ECOM

AND UP

the older adult who is guilty of transmitting the disease of tuberculosis to the young children. Now that the disease has been practically eradicated in our dairy cattle, if it could also be removed from the adult group of the population, it would be almost non-existent among the children because the children get it from the adult. By concentrating our efforts on the adult, we are attacking the source of the trouble.

Is the mass X-ray survey a cure for all our tuberculosis trouble? Most emphatically NO. It is a new tool—a valuable one indeed—that has been added to our armament. But it can never replace the old ones we have used for years. It should be added, but should not replace. It is valuable because in many instances it is the means of discovering trouble before disabling illness drives the individual to seek medical assistance. The earlier disease is detected, the shorter the treatment necessary to arrest. The shorter the treatment necessary, the less expense to all parties concerned. The earlier the disease is detected the more certain is recovery. Mass surveys are designed to locate those whose

case warrant further study. The follow-up of these cases is just as important as their detection by the survey. Careful and thorough study will disclose the fact that many of them are arrested, and need no active treatment. Some will need immediate treatment. Careful study should separate the one group from the other. Unless this can be done, and unless treatment can be provided for those in need of it, much of the value of case finding by any method has been lost. There is little to be gained by finding a case unless we can hope to remedy the condition. To do this there must be cooperation on the part of all parties concerned. And above all there must be complete cooperation on the part of the patient and his family. The health department, the family physician, and the tuberculosis association will all lend their assistance.

The State Board of Health is making a urgent appeal to you to lend such support and cooperation as may be necessary to see to it that all in need of further study are provided with such attention as may be needed. Delay may mean the difference between life and death.

## Book Review

**HYGIENE**—4th edition by Florence L. Meredith, B.Sc., M.D., Professor of Hygiene and Public Health, Tufts College; Fellow of the American Medical, American Public Health, and American Psychiatric Association.

155 illustrations. 838 pages. \$4.00.  
(Published September 18, 1946.)

The Blakiston Co., 1012 Walnut St., Philadelphia 5, Pa.

The Publisher states:

"This is a textbook for college students on physical and mental health from personal and public aspects. The aim is to study the health situations that exist in the life of individuals and peoples, the objectives that arise from

them and what action is scientifically appropriate on the part of the layman and especially the college student. Extensive advances in Hygiene have been made in recent years. New discoveries, new interpretations of facts and new relationships have been established.

"The arrangement of this new edition will enable the student to see the whole field of health as a unit. Each chapter has its personal phase and its public phase. In many chapters the major emphasis is upon personal hygiene."

In the preface the author states:

"The five years between the publication of the third edition of 'Hygiene' and the fourth were remarkable in

medical history. To incorporate all the new developments of science, 'Hygiene' has been entirely reset. Some chapters have been shortened; others have been lengthened; and a few new chapters have been written.

**"Health is, of course, a personal and a public matter.**

"In some of the chapters much attention is given to the public health aspects of the subject. This is especially true, of course, in the chapters on the infectious diseases, the field in which most of the public health work has long been done. However, in some chapters little or no reference is made to public health methods, on the assumption that the student familiar with the scope of public health as presented in the introductory chapters 9 and 10, and also familiar with the nature of the health problem as described in the chapter, would be able to deduce what sort of public health work is or should be in use. This is the case, for example, in the chapter on cancer.

"Throughout, the details of sanitary engineering science and other technical and administrative details have been omitted as non-essential to the college student's understanding and cooperating in the public health work being conducted in his college, community, and nation.

"In many chapters the major emphasis is upon personal hygiene. The reasons for this are three. First, health, like charity, 'begins at home.' Second, our major health problems in this country today are peculiarly personal ones, solvable only through the increased application of science by the individual in his personal life. This is true not only of the conditions that are most often fatal, but of those that cause the greatest amount of disability and unfitness. Third, many of the most important new discoveries are such as can be applied only in personal ways. There remain vast areas in which community and national action can be taken for the health of all, but more and more are group activities becoming organized in support of, and to

provide facilities for, individual action."

To a public health worker the Introduction is particularly pleasing. Twenty pages are used very effectively in giving the reader an element of familiarity with the broader aspects of the public health problem. The next forty-seven pages might have well been classified as anatomy and physiology. Eighteen pages are devoted to a discussion of Diseases and Recovery. Another section which should be pleasing to all members of the medical profession and which will unquestionably interest college students who wish to know something of medical background is Forces for Health. Chapter 5 of this section is essentially a thumbnail medical history. To give our readers some idea of the author's style and method of approach we quote the following:

"At the time of earliest recorded history, man had already begun to take things internally for the treatment of illness. The substance first used as medicines were from the animal world, on the theory that the virtue of the animal would be imparted to the one who partook of its flesh. For example, the lungs of a fox were used in order to increase the 'wind' and to cure lung disease, and the heart of a lion to increase courage and physical strength. In other cases, the animal substance was consumed with the idea of destroying its evil spirit, and thereby banishing the disease. For example, a popular remedy for the children's disease was a whole skinned mouse. These have been found in the stomachs of child mummies. Since the treatment was not abandoned for centuries, some children must have survived it. Pliny in the first century of the Christian era was still recommending it for toothache.

"In trying to find the animal source of the evil spirits of disease, sometimes the ancients stumbled upon a useful form of treatment—for example, fish-liver oil, which has been used for rickets for 6,000 years.

"Asclepios—There appears to be no doubt that this legendary hero really lived, and influenced medicine enormously. It seems probable that the



Greek interest in the perfect body arose with him.

"Throughout Greece after the death of Asclepius, scores of temples sprang up as shrines for his worship. The most famous of these was at Epidaurus, on a hill in the vicinity of a natural spring. Before this marble temple stood a statue of Asclepius and his two daughters, Hygeia, the goddess of health, and Panacea, the goddess of healing.

"Hippocrates was one of the 15 illustrious men who adorned the Age of Pericles. Born 460 B.C. the son of a temple priest, he became the 'Father of Medicine'."

Other persons included in this chapter are Aristotle, Galen, Paracelsus, Vesalius, Pasteur and Bernard.

Chapter 6 is devoted to Medical Science Today. Chapter 7 has a heading: Using Medical Service, which includes discussions as to when to call a physician, what to expect of physicians, choosing a physician and medical aspects. Chapter 8 is entitled, Avoiding Cults and Quackery; Chapter 9, Beginnings of Public Health Work; Chapter 10, Public Health Work Today; Chapter 11, Personal Preventive Medicine. Subsequent chapters are as follows:

Germs, Infection, and Asepsis; Resistance and Immunity; Pneumonia, Influenza, and Other Acute Respiratory Infections; Tuberculosis; Syphilis and Other Venereal Diseases; Various Infectious Diseases; Heart, Arteries, and Kidneys; Cancer; Diabetes and Other Endocrine Gland Disorders; Appendicitis and Other Disorders of the Digestive System; Rheumatism and Other Joint Conditions; Asthma and Other Allergic Conditions; Accidents; Injuries and First Aid; Poisoning and First Aid; Medicines and Self-Medication; Alcohol and Other Habit-Forming Drugs; Oxygenation; Hydration; Circulation and Blood; Muscular Work;

Nutritment and Nutrition; The Daily Diet; Digestion; The Teeth; Weight Control; Excretion and Elimination; The Mechanics of Posture; The Foot; Sunlight; Body Temperature; Atmos-

pheric Conditions; Clothing; Cleanliness and the Skin; Vision and the Eyes; Hearing and Equilibrium; Fatigue, Rest, and Recreation; Sleep; Reproductive Functions; Heredity; Parenthood; Brain and Nerves in Relation to Mental Health; Principles of Mental Hygiene; The Self Impulse; The Sex Impulse; The Social Impulse.

In any textbook of this sort there will always be statements about which there can be a difference of opinion. Dr. Meredith's discussion of tobacco would lead one to the conclusion that she is not one who has enjoyed the pleasures of tobacco in any of its form and that she is not engaged in the tobacco business, either as a farmer, manufacturer, or dealer. Although she deals with tobacco rather harshly, she fails to reform at least one tobacco addict.

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**OUR FRONT COVER**—Several months ago the Public Health Nurses of North Carolina decided that they should express their appreciation of the valiant service which Dr. Cooper had rendered to the cause of public health throughout the years of his professional life. These nurses know how Dr. Cooper inaugurated many of our public health programs. He, perhaps more than anyone else, has advanced the cause of public health nursing in North Carolina.

Each nurse in the State was apparently a member of a committee that was dedicated to finding something which would add to Dr. Cooper's comfort and pleasure. When it became known to other public health workers in the State that the nurses were planning to honor Dr. Cooper, financial aid was offered to them by those who also wished to honor Dr. Cooper. It was the feeling, however, of the nurses that they should bear the entire cost of the gift and that no one except a public health nurse should be a partner in this particular testimonial. They finally decided upon a chair which is shown on our front cover and which was presented to him at the 1946 Meeting of the North Carolina Public Health Association at Winston-Salem in October.















